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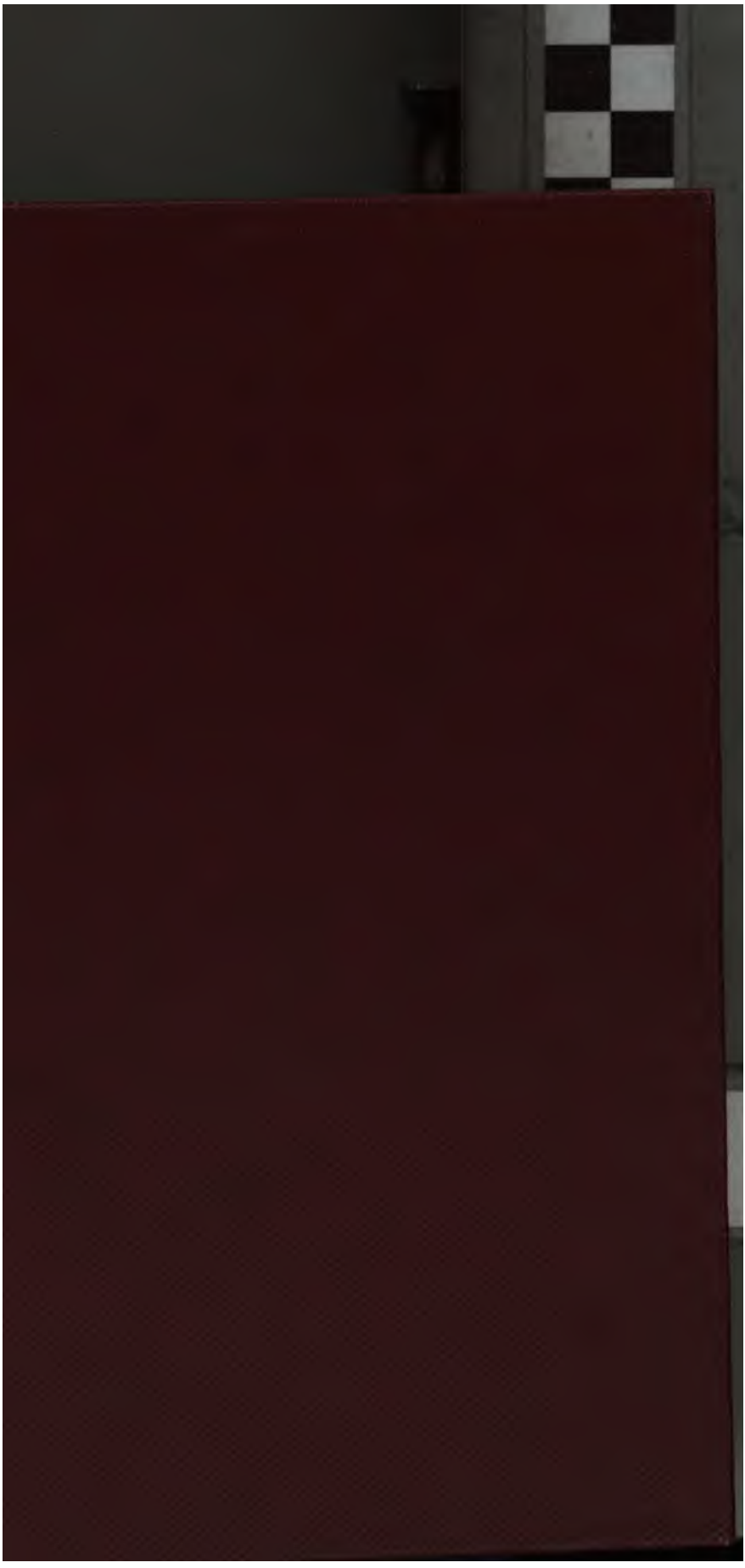
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GRANITE CRAGS

BY

C. F. GORDON CUMMING

AUTHOR OF

'AT HOME IN FIJI,' 'FIRE FOUNTAINS,' 'A LADY'S CRUISE IN A FRENCH MAN-OF-WAR,' 'IN THE HEBRIDES'

WITH ILLUSTRATIONS

WILLIAM BLACKWOOD AND SONS

EDINBURGH AND LONDON

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CONTENTS.

CHAPTER I.

PAGE

TAHITI TO SAN FRANCISCO — EASTER-DAY IN CALIFORNIA — A NEW CITY—RECLAIMED LAND—WILD LUPINES—SEA-OTTERS —THE LONE MOUNTAIN—PROGRESSIVE FUNERALS, . . 1

CHAPTER II.

SPANISH NAMES—TRACES OF THE EARLY MISSION—SAN RAFAEL —THE COAST RANGE—REDWOOD FOREST—A CHAIN OF VOLCANOES—A PARADISE OF FLOWERS—POISON-OAK, . . 37

CHAPTER III.

START FOR THE SIERRA NEVADA—THE GREAT SAN JOAQUIN AND SACRAMENTO VALLEYS — WHOLESALE FARMING-ORCHARDS—MERCED—HORNITOS — PAH-UTE INDIANS — MARIPOSA VALLEY—CLARKE'S RANCH, ... 54

CHAPTER IV.

IN THE FOREST—SEQUOIA GIGANTEA—THE RED SNOW-FLOWER —YŌ-SEMITÉ VALLEY IN WINTER—A SNOW-SHOWER, . 75

CHAPTER V.

TO THE VALLEY—A WAYSIDE LUNCH—A GRANITE PRISON—GIANT CRAGS—BRIDAL VEIL FALL—LEAFLESS TREES—MAY-DAY—GRANITE ARCHES—MIRROR LAKE—GRANITE DOMES, 91

CHAPTER VI.

THE GREAT YŌ-SEMITÉ FALLS—SEEN FROM BELOW, SIDEWAYS, AND FROM ABOVE—MOUNTAIN-TRAILS—OTHER YŌ-SEMITÉS—THE DOMES—GEORGE ANDERSON, ... 109

CHAPTER VII.

A COTTAGE HOTEL—THE VILLAGE—YOUNG STUDENTS—THE CASCADES—DIGGER INDIAN CAMP—PRIMITIVE MAN—ACORN-FLOUR—EDIBLE PINES—INDIAN AGENCIES—THE MODOC WAR, ... 126

CHAPTER VIII.

THE STRUGGLES OF THE RED MAN AND THE WHITE—ATTACKS ON THE RAILROAD BY INDIANS AND BY BRIGANDS, . 151

CHAPTER IX.

RIDE TO GLACIER POINT—VIEW OF THE MERCED AND LYELL GROUPS—A NEW REST-HOUSE—FROGS' CHORUS—VERNAL AND NEVADA FALLS—A SECLUDED INN—CLOUD'S REST, . 168

CHAPTER X.

EASY LIFE IN THE VALLEY—INDIAN NAMES—MINERS' NAMES—PLANTS AND FLOWERS—HURRIED TRAVELLERS—GOD SAVE THE QUEEN!—SUNDAY SERVICES, . . . 187

CHAPTER XI.

A GENERAL SKETCH OF THE MOUNTAIN-RANGES OF CALIFORNIA, 216

CHAPTER XII.

HOME LETTERS—CALIFORNIAN POSTS TWENTY YEARS AGO—HAPPY DAYS IN THE VALLEY—THE NOBLE SAVAGE—CAMPERS—RATTLESNAKES—NATIONAL PARKS, . . . 235

CHAPTER XIII.

THE FOURTH OF JULY—BALLS IN THE SIERRAS—A PARTY OF EXPLORERS—HETCH-HETCHY VALLEY—SUMMIT OF CLOUD'S REST—SUNSET—BLACKBERRIES, ... 262

CHAPTER XIV.

HUMAN SHEEP—EXHIBITION—WATKINS'S PHOTOGRAPHS—FAREWELL TO YŌ-SEMITÉ—TUOLUMNE BIG TREE—PLACER-MINING—CHINESE CAMP—SONORA—PACTOLUS—HYDRAULIC MINING—A MINER'S CITY—FRUIT AND DUST, . . 281

CHAPTER XV.

HOT GORGE OF THE STANISLAUS—A SLEEPY COACHMAN—MURPHY'S—A CHILL DRIVE—CALAVERAS—THE FOREST—BIG TREES—RATTLESNAKES—WOODPECKERS AND BLUE JAYS—MAGGOTS—SQUIRRELS—TARANTULAS, . . . 301

CHAPTER XVI.

THE FORESTS OF THE SIERRAS—PINUS LAMBERTIANA—ABIES WILLIAMSONII, ABIES DOUGLASII—PICEA AMABILIS, PICEA GRANDIS—PINUS MONTICOLA, PINUS PONDEROSA, PINUS CONTORTA, PINUS TUBERCULATA, ... 322

CHAPTER XVII.

IN THE SOUTH GROVE—GIANT TREES—HAPPY HUNTING-GROUNDS IN SOUTHERN CALIFORNIA — MURPHY'S — VIGILANCE COMMITTEES—BILL FOSDICK'S FAILING, ... 333

CHAPTER XVIII.

A CALIFORNIAN HARVEST—GLENN'S FARM—LARGE VEGETABLES —SOUTHERN ORCHARDS—CALIFORNIAN OLIVES—BEET-ROOT SUGAR—GERANIUM HEDGES—LUXURIANT ROSES, . . 348

CHAPTER XIX.

CHROMO-LITHOGRAPHY—CALIFORNIAN GRAPES, AND WINES— SOCIETY—A TOIL OF A PLEASURE—A HOME IN THE NEW WORLD, ... 359

APPENDIX, ... 375

LIST OF ILLUSTRATIONS.

	PAGE
The Sentinel Rock, . . . *Frontispiece*	
Looking Down the Valley, ...	94
The Yō-Semité Fall, ...	110
Indian Camp beside the Merced River, . .	132
Glacier Point, ...	168
The May Floods in the Valley, ...	176
The Nevada and Vernal Falls, ...	178
View of the Sierras from Sentinel Dome, . .	286
Map, ... *at end of book.*	



GRANITE CRAGS.

CHAPTER I.

TAHITI TO SAN FRANCISCO—EASTER-DAY IN CALIFORNIA—A NEW CITY—RECLAIMED LAND—WILD LUPINES—SEA-OTTERS—THE LONE MOUNTAIN—PROGRESSIVE FUNERALS.

ON BOARD THE PALOMA, OFF CALIFORNIA,
Easter-Eve, April 20, 1878.

DEAR BROTHER WANDERER,—I must write you a few lines ere setting foot for the first time in the great New World, that I may despatch them as soon as we touch land, and start them off in search of you. I suppose if I address to London—the great centre—they will be forwarded to you somewhere within a year, whether your erratic flight has landed you in Kamschatka or Patagonia, Spitzbergen or Tasmania.

As for me, I am strangely behindhand in the matter of news, as it is *nine months* since a letter has reached me, with the exception of a few inter-insular notes from

French officials and Tahitian chiefesses—kind, good friends, who have made the last half-year wonderfully pleasant to me.

But from kinsfolk and home, not one message could have reached me, and a few chance sentences in stray newspapers have been the only echoes that have floated to me across the great waters. For of course all my letters were sent to Fiji, which, as you know, has been our home for the last two years. (I left it in the beginning of September, tempted by an invitation to make a very delightful cruise in a French man-of-war, which has resulted in my remaining for several months in beautiful Tahiti.)

Of course the last letters that reached me ere I left Fiji were rather antiquated, bearing date June 4, 1877; and all of more recent date have gone on accumulating in Fiji, till, finding I could not return there direct, I requested that they should be sent to await me at Honolulu, which port I hoped to have reached ere now in one of the sailing vessels which are occasionally despatched from Tahiti to fetch cattle from the Sandwich Isles.

However, after long waiting, I found that the chances of getting a ship were so uncertain, that the shortest way in the end would be to take a passage all the way to San Francisco in this little brigantine of 230 tons, and thence return to Honolulu by one of the Great Pacific mail-steamers.

As your wanderings have not yet led you to the Pacific (and I know that you, like myself, only learn your geography by actually going over the ground), I may as well

mention that the distance from Tahiti to Honolulu is about two thousand miles, and from Tahiti to San Francisco is actually about four thousand miles, measured as the crow flies. But what with untoward winds and unlooked-for currents, our flight has rather resembled that of the great brown "gonies" that bear us company, and we have contrived on this voyage to make fully six thousand miles, and have taken six weeks to do it, and that, without touching land.

The gonies would delight you. What may be their scientific name I cannot say for certain, though I am told that they are young albatross, who, like the "ugly duckling," do not develop their snowy plumage the first year. We see a few of these grand birds, with the wild, fearless eyes, and there is no mistaking *them;* but the gonies are our never-failing companions. They are large birds of a greyish-brown colour, with long, narrow wings, black-tipped. I am sure some of them must measure six feet across. They wheel around us, and sweep to and fro with an easy, graceful flight, which is beautiful to behold, and fills me with envy. Oh, had I the wings of a gonie! Sometimes a tempting fish-shoal attracts them, and they drop far behind us. A few moments later they are miles ahead; so, apparently without the slightest exertion, they float to and fro at their own wild will, and travel ten times faster than the swiftest steamer.

Though the voyage has been so unexpectedly prolonged, I cannot say that I have found it unpleasant; quite the contrary, it has been like a summer yachting cruise.

The Paloma [1] is a beautiful little ship, carrying a crowd of whitest sails; she is exquisitely clean, her ship's company consist of singularly quiet, gentle Swedes, Germans, and Rarotongans. Our cabins are very comfortable; my only fellow-passengers are most friendly and agreeable. We carry a cargo of 270,000 oranges, gathered green in the orange-groves of Tahiti, but which have ripened during this long voyage, and we have done our best to diminish their number.

We have had lovely weather, though too often becalmed for days together, or else drifting aimlessly with the currents, or just kept moving by the faintest, softest breeze, which has generally carried us in the wrong direction. I never more fully realised the weariness of the "wandering fields of barren foam."

We have proved the truth of the old adage, that after a storm comes a calm, for just before we sailed from Tahiti, a terrific hurricane had swept over the isles lying to the north, in the "Dangerous Archipelago." Many land birds came on board when we were fully three hundred miles from the Paumotus. The captain says they are kinds which he has never seen on any previous voyage, so he believes they had been blown away from home by the hurricane. He thinks the whole atmosphere is out of order, as, according to all experience, we have been entitled to a south-east trade-wind all the time, whereas, for days and days together, every breath of air was from north-east, driving us far out of our course.

[1] The Dove (*Spanish*).

The moonlight nights have been perfect, clear as day. Occasionally we have had heavy showers, which we hailed with delight, as affording us a chance of a fresh-water bath. For though the good Rarotongans daily rig up a bathing-tent on deck, where we may splash to our heart's content in great tubs of salt water, we often think regretfully of the lovely limpid streams of Tahiti, and long for soft fresh water. So whenever a welcome shower begins, we don our Tahitian *sacques* (long flowing dressing-gowns), and bless the heaven-sent shower-bath.

Now we are drawing very near our journey's end, and I confess I do hope I may have a few days on *terra firma* ere starting on the long return voyage to Hawaii. We have been looking forward to spending Easter-day ashore, but now there appears very small chance of our doing so.

Since the Easter morning when we sailed from Marseilles, I have never been within hail of our own Church for any one festival. The following Easter was spent in the wilds of Fiji, and this day last year I was among the Maoris of the volcanic region in New Zealand. As to Christmas, the first was spent with a wild tribe of Fijians who had only just given up cannibalism; on the next, we were transhipping from a little steamer to a big one, *en route* to New Zealand; and last Christmas-day found me in one of the loveliest of Tahitian valleys. So you see that a real ecclesiastical Easter would have special attractions. Nevertheless we have almost given up hope of reaching land so soon, as the wind has failed us again.



SAN FRANCISCO, *Easter Monday.*

I had written so far when a fresh breeze sprang up, and we literally flew the last hundred and fifty miles, entering the Golden Gates at 2 A.M. It was clear moonlight, so I was able to reconnoitre, and took in my first impressions of America, in a series of lighthouses, which mark various points in the magnificent harbour, in which there is said to be room for all the navies of Europe. Finally, we anchored just before the cold grey dawn crept up, with a chilling shiver (oh how different from the balmy tropical mornings in which I have revelled for so long!).

There was nothing golden in our first glimpses of California. We indulged in a jorum of excellent hot gin-toddy, to correct the bitter, damp cold; and soon after sunrise we watched a number of huge steamers, densely crowded with excursionists, start from the different wharfs, to make the most of the Easter holiday.

Then we made our little preparations for landing. A sleepy, shivering Custom-house officer had come on board near the harbour-mouth; but as it was Sunday, none of our baggage could pass the Customs. We were each, however, allowed to take a small bag, supposed to be sufficient for one night. Apparently every one is expected to bear his own burden in this free and independent land, but the friendly Swedish mate insisted on carrying the ladies' bags to the hotel where we secured rooms.

By this time the Easter chimes were pealing from a multitude of church bells, and the streets were thronged with masses of human beings. The grey chill morning

was succeeded by a day of brilliant sunlight, and among the crowds of church-goers were many in apparel positively gorgeous. London streets would wonder to find themselves swept by such magnificent satins and velvets, or to see such diamonds glittering in the light of the sun. It struck me painfully to notice the great proportion of women who would evidently have been attractive but for the free use of white and rouge: you might fancy that "this glorious climate of California" could dispense with such polluting adjuncts, but these ladies evidently think otherwise. And yet how they would despise their brown sisters or brothers who on a gala-day "assist nature" by a touch of vermilion or a few streaks of blue!

My travelling companion being a rigid Roman Catholic, led the way to St Mary's Roman Catholic Cathedral, where the bishop was celebrating High Mass. It is a plain building, but made beautiful by its Easter decorations and the profusion of exquisite flowers. Thousands of roses and lilies made the air fragrant, and were doubly welcome to eyes weary of the broad restless ocean.

It seemed to me somewhat a strange coincidence that, having received my last ecclesiastical impressions of the Old World at the Roman Catholic Church of Saint Roch, in Paris, on Good Friday 1875, I should next hear the grand Easter Anthem in a Roman Catholic cathedral on this my first morning in the New World. The singing was most lovely, but the crowd was so dense that there was not a chance of a seat; so, leaving my friend to her devotions, I went to Grace Church—an Episcopal



Church which she had pointed out to me a little farther.

This was likewise densely crowded, but a very civil stranger gave me his seat, for which I was grateful, the walk uphill from the wharf having proved fatiguing. Here also the decorations are most elaborate. Besides the great cross above the altar (made entirely of rare hothouse flowers), there hangs suspended from the great chancel arch an immense cross of pure white Calla lilies (*Arum*) in a circle of evergreens, beneath which, in very large evergreen letters, each hanging separate, is the angel's Easter greeting—"HE IS RISEN." The effect of this device, so mysteriously floating in mid-air, is very striking.

In every corner of the church flowers have been showered with the same lavish hand—the font, lectern, pulpit, organ, walls, but especially in the chancel, where the choicest flowers are reserved for the altar-vases and the altar-rails, which are altogether hidden by the wealth of exquisite roses. To some sensitive persons I can imagine that their perfume might have been overpowering, but to me it seemed like a breath from heaven.

It was pleasant, too, in this "far country," to hear the old familiar liturgy, like a voice from over the wide waters, bringing with it a flood of home memories and associations. Moreover, it was quite unexpected, as during the last two years I have been thrown in company with so many different regiments of the great Christian army, that I suppose I had assumed that this Californian church would prove one more variety. Certainly I had not

realised that America has preserved the old Book of Common Prayer almost intact, with only a few minor changes, every one of which seems to have been dictated by good common-sense—as, for instance, after the Commandments, where we so abruptly introduce the prayer for the Queen, the American priest adds, "Hear also what our Lord Jesus Christ saith," and sums up the Old Law by pronouncing the New Commandment, in the words of St Matthew, xxii. 37-40. He then offers the closing prayer from the Confirmation Service, that we may be kept in the ways of God's law and the works of His commandments.

All vain repetitions are avoided. Either the Apostles' Creed or the Nicene may be said both morning and evening, but never both during one service. The frequent reiteration of the Lord's Prayer is avoided. In the Canticles, such portions as seem inapplicable to ourselves (such as the last half of the Venite) are omitted, and verses of praise from the Psalms are substituted. The Magnificat is replaced by the 92d Psalm; the Nunc Dimittis by the 103d, "Praise the Lord, O my soul." Some advantageous verbal alterations occur—as in the Litany, "In all time of our wealth" is rendered "all time of our prosperity."

The principal variations from the English Prayer-Book occur in the order of the Service for the Holy Communion, which is almost identical with the old office of the Scottish Episcopal Church, and as such, familiar to my ears. In short, all was as a dream of home, with the exception



of the strange and unnatural sound of hearing for the first time the name of the President of the United States substituted for that of "Victoria our Queen," and the use of the term "Christian rulers" in lieu of "kings."

The singing is admirable, but not congregational. It is left to a carefully trained (and, I am told, highly paid) choir of men and women. Surpliced choirs are apparently not in favour here, from an impression that they tend toward dreaded ritualism.

In the course of the day I looked into various other churches, each vying with the other in the beauty of its Easter decorations. One had the entire reredos, as it were, inlaid with lilies of the valley on a groundwork of maidenhair fern; above the altar was a beautiful cross of white camellias and tuberoses, and the chancel-rails, lectern, and pulpit are dressed with lovely leaves of Calla lilies, while the most exquisite white exotics adorn the font. Wreaths and emblems, crosses and crowns, of white camellias or white pinks, with here and there a point of rich colour in some grand cluster of glorious red roses, delight the eye wherever it turns.

This morning the newspapers devote several pages to descriptions of the principal features of each church in the city. It reduces the poetry of the thing to somewhat of a prosaic detail, to find an exact record of how many thousands of each flower were used in the decoration of each church, and what favourite "stars" sang in each choir. I learn that in Grace Church four thousand white Calla lilies form one item. Yet they did not seem more numer-

ous there than in many other churches; so the inference is, that we have reached a floral paradise, strikingly in contrast with my recent experience of the general scarcity of flowers in the South Sea Isles.

You would have thought that this was indeed the case could you have seen this city yesterday evening. In California the evening of Easter-day is the children's flower festival, and every church in San Francisco devotes its evening service to the little ones. I found my way back to Grace Church, and have rarely witnessed a prettier spectacle. There must have been many hundred children, of all ranks and ages, down to the tiniest toddles of the infant school. All were prettily dressed, and they marched in procession, carrying silken banners, and singing carols. All carried flowers, either in pretty baskets, or great bouquets, or arranged in some device. Many had collected small offerings of money for different charitable objects, and each, in turn, presented its gift to be laid on the altar, which soon was literally buried beneath the flowers heaped upon it, which were afterwards distributed to the hospitals and to all the sick poor throughout the great city, that they might whisper the Easter message to many a lonely sufferer. The service consisted chiefly of carol-singing by the little ones and their teachers, and it was altogether very bright and happy.

I do not know how all this strikes you. To me, I must confess, it was a great surprise. I had imagined this city of St Francis to be most unsaintly—or, not to mince words, I supposed it was still the rowdy city where, but a

few years ago, such wild scenes of misrule were the common events of daily life. And now my first impressions are of thronged churches, hymns of praise, and flower festivals! After the evening service I walked back to the hotel alone, passing through several dimly lighted streets. All seemed quiet and peaceful. Multitudes of young girls and their teachers must have gone by lonely and devious paths on their homeward way. But no shadow of dread seemed to suggest itself to any parents. And yet, when I returned to the hotel, I heard gentlemen discussing the state of the town, and declaring that it was unsafe to go out after dark without a revolver. Evidently the subject admits of varied colouring.

I am told that the "dangerous class" here are a race of young rowdies, known here as "hoodlums," a recognised class of roughs, male and female, whose misdeeds are a constant source of annoyance to the citizens, who nevertheless seem powerless to suppress the mischief. I suppose that the police are numerically too weak (they only number about four hundred); and of course this great city yields a very large body of ill-conditioned "hobbledehoys," who form a raw material ready to develop into full-blown criminals.

There are a large number of well-known gangs of these young ne'er-do-weels, composed of lads and lassies of the very roughest type, who are always on the prowl, looking out what mischief they can do. Many of them carry knives and revolvers, and glory in a chance of using them, not only on belated wanderers, but occasionally on quiet

shopkeepers whose goods they covet, or publicans whose beer and spirits they object to pay for. But the poor, inoffensive, diligent Chinamen are the objects of especial hatred to these cowardly rascals, who never miss a chance of molesting them; and, of course, no policeman ever happens to be near when one of the gangs sets upon some solitary workman, and beat and kick him within an inch of his life.

April 23d.

What a strange world this is for unexpected meetings! Two years ago a Sussex friend sent me a letter of introduction to the representative of a large banking firm in this city. Yesterday morning, finding that three weeks would elapse ere a steamer sailed for Honolulu, I questioned whether there was any use in delivering so stale a letter. Counsels of wisdom said "Yes," so the letter was sent out, and half an hour later the writer himself stood beside me! I then learnt, what I had never before realised, that he is himself the head of the firm, and had just chanced to run out from England on some matter of business, so his own letter was handed to him.

Never was the face of a friend more welcome. Having recently parted with some of my kindred, he was able to give me good news of them, and soon afterwards he returned with Mr Booker, H.B.M. Consul, who had tidings of my friends in Fiji. Both these gentlemen say, that if I had carefully selected my time for visiting California, I could not have chosen better, for that this is the very best



season. An unusually wet winter is just over, and has left the country exquisitely green, and carpeted with wild flowers. Every stream is full, and all waterfalls are in glory. They say that if only the snows on the Sierra Nevada are sufficiently melted to allow of travelling, I ought on no account to miss seeing the Yō-semité Valley, and that I could easily go there and back, before the steamer sails. So they have promised to make all inquiries, and to look out for a suitable escort for this expedition.

Meanwhile, this morning, Mr Harrison took me for a long and most interesting drive to all the principal points in this gigantic baby city. Strange, indeed, it is to hear of the marvellous changes that have occurred here within the last thirty years, all within his own memory.

Prior to 1849, San Francisco was merely one of twenty small stations of the old Spanish Mission; and the only antiquity to be seen in the city—the Westminster Abbey which knits the present century with the past—is the old mission church of the patron saint, St Francis of Assisi, a very plain building of adobe—*i.e.*, sun-dried bricks. In its graveyards are buried wanderers from many lands, but the churchyard, like the church, looks melancholy and decayed. It bears date 1776, and was the first church of the little Spanish colony of priests, who came here to teach the Indians, and were the only white men on this coast prior to the discovery of gold.

They themselves knew of the existence of gold, but they discouraged all search for it, knowing well the evil that must result to their Indian converts whenever that mad

excitement, consequent on a gold-rush, should flood California with all the wild spirits of the earth. And rightly these good fathers judged.

Till 1849 they were able to guard their fold. Then came the gold-fever; and in a few months ships of all nations entered the Golden Gates, bringing thousands and tens of thousands to retrieve broken fortunes, or seek new ones, in this Land of Promise. On the desert sandhills, where hitherto only a few wandering Indians had built their bark huts, there were now scattered tents, standing singly or in groups. Soon disorderly little settlements of shabby shanties were run up, which gradually enlarged till they covered all the available land.

The history of those early years was a chronicle of anarchy. Life in the city was one of reckless dissipation —a natural reaction from the hardest phases of privation and toil endured in search of gold. Society was turned upside down. Men well born and well bred were thankful to turn their hand to every conceivable work which would bring in the means of life. I heard of one English gentleman who, finding himself robbed of everything except his rifle, made his way to the mining districts, and made a very fair living by shooting bears, whose flesh the hungry miners gladly bought at a dollar per pound. As a good bear weighs six or seven hundred pounds, the hunter soon realised a "genteel competency" as a "flesher."

At first the miner's work was confined to what is called "placer" mining—that is, surface digging,—and washing for gold in beds of streams. Then came the more sys-



tematic business of quartz-crushing; and by 1858 three hundred mills, with strong machinery, were hard at work. By that time the gold-fever, having reached its height, began to subside; and multitudes, weary of certain toil for such uncertain profits, turned their minds to other industries. By 1861, not more than fifty mills still continued at work.

By degrees the rowdies, who had given the settlement at San Francisco such a bad name, vanished before the presence of Vigilance Committees and Lynch law. Those who escaped summary justice took the hint from a word of warning, and the majority went farther inland.

Now, in the place where those log and shingle huts then lay scattered, stands a vast city of 300,000 inhabitants. It covers a space of forty-two square miles, and has many really splendid streets, and a large number of immense hotels like great palaces (most luxurious in every respect save that of cosiness—a point which strikes one, because so many families have no other home).

One of the principal buildings is the great Mint of the United States, said to be the most perfect institution of its kind in the whole world. It is open to all comers every forenoon, and citizens and strangers are alike at liberty to inspect the manufacture of Californian gold into coins equivalent to English sovereigns, but so much purer, that ours will only pass here at a discount.

There are theatres and an opera-house; a great city hall; splendid public libraries, free to all citizens above fifteen years of age; equally free are the excellent Govern-

ment schools. Besides these, every denomination has its special schools, churches, and chapels. There are the Roman Catholic and Episcopal cathedrals, Jewish synagogues and Chinese temples, gorgeous Turkish baths, numerous admirable markets scattered through the city. In its busy working districts there are foundries and machine shops, smithy-works, lumber-merchants' yards, artificial stone works, patent marble works, potteries, woollen factories—in short, every industry you can conceive.

And yet all the older inhabitants recollect when the site of this great city was only a tract of most desolate sandhills, and when ships were lying at anchor above the sands which now actually serve as foundation for one of the finest streets—one, moreover, at some distance from the sea, which has gradually been driven back, as men, determined to retain advantageous shipping positions, built their houses on piles, filled up the space beneath them, and so reclaimed acre after acre from the harbour. The present sea-wall which guards this stolen ground is built up from a depth of about thirty feet below low-water mark. There are not wanting prophets of evil to foretell days of possible disaster, when some tidal wave or volcanic disturbance shall arise and restore to Ocean the land thus wrested from it.

We drove to a high point, whence we could look down on the city as on a map. The spot where we stood was once a quiet lake, and my companion told me how his happiest hours were spent snipe-shooting on its shores. Now it is one of the great reservoirs for the city.

There are, however, other reservoirs in the Coast Range Mountains, so that the supply is equal to the great demand —which is enormously increased by the multitude of gardens and beautifully kept lawns, each requiring constant irrigation throughout the summer. I am told that the water-rates are tremendous, and have to be paid monthly in advance. Many families are said to spend far more on water than on bread; but they account it money well invested, as it has transformed these sand-mountains into a region of most luxuriant gardens. Moreover, it is the safeguard against fire, which must be an ever-present danger in a town of which wood forms so large a part.

It certainly is strange to see a vast city with such splendid streets and such princely homes, large mansions and pleasant Elizabethan villas—all apparently of beautiful white stone—and then learn that it is all wooden, and that the stone-like appearance is produced by a sprinkling of fine sand over whitish paint. This is not because there is any lack of stone for building purposes, but because the occasional slight earthquake shocks are a continual reminder that some day a great upheaval may come and swallow up—or at least severely shake—the huge young city.

There are boiling springs at no great distance from here, which forcibly suggest a connecting-link with the great volcanoes which lie to the north, and forbid too absolute security. But even in respect to moderate earthquakes, wooden houses are found to suffer less than stone buildings, and are therefore preferred.

Recently, however, some of the great firms, who dread

fire more than earthquakes, have built their business houses of real stone. The first to set this example was Wells, Fargo, & Co.'s Express (who undertake to convey everything for everybody, to and from every corner of the known world). But so expensive was labour in San Francisco, that this first stone house was imported bodily from China, where each block was cut and fitted ready for its place!

As a precaution against earthquakes, many of the principal buildings—hotels, warehouses, and shops—have an inner skeleton made of strong bands of wrought-iron, fastened together by immense iron bolts. Over this framework is built an outer casing of brick or stone, supposed to be fire-proof.

It is said that in building the Palace Hotel three thousand tons of iron were used in preparing the bands for the skeleton, besides the enormous amount required for the great iron columns which support the vast building. Of these there are upwards of sixty round the central quadrangle alone; and above this rise seven storeys, tier above tier, each with a similar number of columns. Of the amount of iron-work in other parts of the building, I can form no notion; but as the building covers about three acres, you can imagine it is considerable.

There is also a fire-proof iron staircase, cased in solid brick and stone, extending to the very summit of the hotel, and with iron doors opening on to each floor, so as to ensure a retreat in case of need. I can only say, "Heaven help all who have to trust to it!"

Of course there are all manner of other staircases, besides the five "elevators" which are ceaselessly ascending and descending to convey all the inhabitants of the 750 suites of rooms (1000 bedrooms) to their several apartments. These are graduated on a varying scale of luxury—"an apartment" generally including, at least, bedroom, bath-room, and sitting-room; and as every one of the 750 lodgers would feel aggrieved were he not provided with a bay-window, this and all the other great hotels are closely studded with these from top to bottom, presenting a very curious appearance externally.

Partly as a precaution against fire, the majority of dwelling-houses are built apart, each with a pleasant bit of shrubbery, so that you drive for miles through long avenues of fine detached houses, rather suggestive of the neighbourhood of a country town than of a huge busy city.

Of course in a town of which so large a portion is built of wood, the utmost importance attaches to the perfecting of every detail of fire-extinguishing organisation. The ever-present danger is sufficiently proven by the fact that no less than ninety-five insurance companies have found it worth their while to establish agencies in this city.

These companies are obliged by the State to support a fire-brigade of their own, to supplement the work of the city fire-brigade. It is called the Underwriters' Fire Patrol; and so perfect is the organisation of these corps, that they literally move by electricity, and at any hour of day or night they are warranted to start a fully equipped fire-

engine within ten seconds of the time when the electric alarm sounds.

In a large proportion of the citizens' houses there are electric signals, by which the first outbreak of fire can instantly be communicated to the centre of the district, whence the alarm is immediately transmitted to every fire-station—the same electric current being employed to set in motion a series of most ingenious mechanical contrivances, which awaken both officers and men, light the gas, open the doors, and adjust the harness.

At every station the engines, which are worked by steam, are always ready—fires kindled, water boiling—and the splendid horses stand ready harnessed in their stalls, the weight of the collar being supported by a rope attached to the ceiling. The electric stroke which sounds the alarm works a mechanism which drops the collars, detaches the halters, and brings down a stroke of a light whip—a signal which causes each well-trained horse instantly to spring to his appointed place to right or left of the pole. An instantaneous movement simultaneously attaches the pole-chains to the collar, fastens the reins, and slips in the bit, while the other portions of the harness are similarly fastened to the engine.

While this is going on down-stairs, the beds in the dormitory overhead are jerked up, so as to turn out the sleepers, who are literally *thrown* into their fire-dress, with boots attached. Up flashes the gas, and the doors are thrown open—all by the same electric current. Straight stairs lead from the dormitories to the engine-room, but even to

rush down these would lose a second, so slides are fixed parallel with each, and down these the firemen glide, with a velocity which emulates that of the greased lightning which was so often commended to our attention in our younger days, when our seniors despatched us on troublesome errands.

In some of the great public buildings, such as the huge Palace Hotel, there are *self-acting electric fire-alarms*, which, *without any human agency*, call the attention of the central office to any unusual heat in any part of the house—so that a fire breaking out in a store-room or cupboard, actually gives notice of its own existence. Not content, however, with these electric warnings, the great hotels have watchmen always on patrol, whose duty it is to inspect every corner of the premises every half-hour, day and night.

The water-supply is also well attended to. For instance, the Palace Hotel has a huge reservoir beneath the central court, and seven great tanks on the roof. The former contains 630,000 gallons, the latter 130,000 gallons, and all are supplied by four artesian wells, capable of supplying 28,000 gallons per hour. This water-supply is carried to every corner of the huge building by means of about fifty upright four-inch pipes of wrought-iron, reaching from the basement to the roof. They are fed by three steam fire-pumps, and in their turn supply an endless extent of fire-hose.

So there certainly is no lack of precaution regarding this terrible source of danger; and as every district of the

town, and indeed a vast number of private houses, are in telegraphic communication with the fire department, it is evident that little time need be lost. Indeed, what with telegraphs and telephones, the whole city is like one great room—distances are annihilated. The sky is veiled by a perfect network of wires connecting private dwellings with business offices. A lady has just shown me, on the wall beside her, a small instrument like a clock, the face of which is divided into sections, having reference to fire, hackney-carriage, private carriage, message-boys, &c. &c.; so that, by turning the magic needle to the point required, she can, without leaving her room, summon a carriage, an errand-boy, a fire-engine, or any other trifle she may require. She tells me that this is quite a common luxury. Surely the genii of the Arabian Nights have cast their mantle on California, and Aladdin's lantern is the common property of all her fortunate daughters!

Leaving the city, we drove some miles to see the great Golden Gate Park, which is to be the Hyde Park of San Francisco, and is already "the Drive" and "Rotten Row" for all fashionables. It is still so new that its beauty is chiefly a thing of the future; but already it is a triumph of art and industry over an ungenial nature. Only six years ago it was a waste of desert sand, like those rolling sandhills which extend on every side of it.

It was determined to reclaim about a thousand acres of these desolate dunes, so a large tract was enclosed and thickly planted with the hardy perennial lupine, which is indigenous to California, and, flourishing on this thirsty

soil, grows to the size of a large bush. When it has once taken a firm hold of the sand, it subdues it effectually, and creates a soil on which, with the aid of abundant irrigation, turf will grow. Tens of thousands of trees have been planted, and are growing at an almost incredible rate; while the turf has been so diligently cared for, that already the wilderness is transformed into a rolling expanse of smoothest undulating lawn, brilliant with flower-beds. The ground is admirably laid out, and promises to become a thing of ever-increasing beauty.

To me, the chief fascination lay in the pioneer lupines, which, of their own sweet will, are striving to carry on the work of reclamation, and have overspread thousands of acres of the arid shifting sands. I had never dreamt of such wealth of flowers. Hitherto my ideas of lupines have been derived from the little packets which, as children, we sowed so carefully in our gardens, embedding them in chopped gorse as a protection against slugs and other foes. But here, for miles we drove through lupine scrub, each bush bearing thousands of spikes—orange, pale yellow, blue, white, lilac, or pink. Besides these shrub lupines, all the other sorts common in English gardens grow abundantly—the large succulent blue lupine, the smaller lemon-colour variety, and all the dwarfs of every hue.

Here, then, was a glimpse of California's lavish way of doing things. Elsewhere we drove among green pasture-hills, variegated by broad patches of the most intense orange. Here was Californian gold indeed, glowing in the

bright sunlight. I was puzzled by this new freak of vegetation, and marvelled what flowers had been so abundantly showered all over the green hills. It was too deep in colour for the familiar buttercups, though these abound; so at last I had to satisfy my curiosity by a nearer inspection, and recognised that these sheets of yellow gold are all produced by the eschscholtzia, which is here known as Californian poppy. Here and there a patch of deep blue larkspur, or the scarlet "painted brush," varied the colouring of this beautiful wild garden.

The object of our drive was to reach the cliffs overlooking the Golden Gates, which as yet I had only seen in the moonlight as we sailed through them into the Bay of San Francisco. The title is highly metaphorical, as the headlands which form the portals of the bay are in no sense golden, or even beautiful like all the cliffs round the harbour. They are of a dull-red colour, crowned with slopes of greenest grass. But as a sea view, the prospect was magnificent. The Pacific, untrue to its name, was all foam-flecked by angry waves, and huge green billows rolled in with deafening roar, and dashed in white spray against the gates.

But the fascination of the scene lay in the foreground. where herds of sea-lions[1] are for ever disporting themselves on the rocks, totally regardless of the human presence on the cliffs above, although a comfortable hotel has there been built, with a broad verandah from which all lovers of strange wild creatures can watch these to their

[1] *Otaria stelleri.*



hearts' content. They are the pets of the State, happily protected by law, and no Goth dares to fire a gun in their demesne—the penalty for even firing a gun near them being a sum equal to £30, while £100 is the penalty for killing one. So in fearless security these creatures, generally so shy, remain in peaceful possession of their ancestral rocks, within an hour's drive of the great city.

The number of the herd is variously estimated at from 100 to 300. I do not myself see how any one can pretend to count animals which are for ever gliding in and out of the water, and are, moreover, so much alike. They are like a crowd of black, slimy leeches, as they climb, wriggling, out of the green sea or the white surf, with fish in mouth, and lie basking on the rocks to enjoy their prey. The hot sun soon dries them, and then they appear to be greyish-brown. How they do bellow and roar, and turn their sleepy heads, and gape at one another, showing formidable white teeth! Sometimes they all yelp simultaneously, like a pack of fox-hounds. Then some old grandfather begins to roar, waking the echoes with his deep base.

Some have strongly marked individuality, and are easily recognised; so of course these have received characteristic names. One patriarch, before whose presence all the others slink away meekly, is known as Ben Butler. He is a huge sleek fellow, fatter than any fat sow, and is supposed to weigh about 2000 lb.! Ian Campbell says they are like great mastiffs with paralysed hind-quarters. They certainly *are* very like gigantic leeches—so soft, and glossy, and black!

Sometimes they have furious fights. They open their great mouths, and go at one another, biting viciously, and barking. At last one is beaten, and sinks down into the waves to hide his diminished head, while the victor draws himself up the steep jagged black rock by means of his long front flippers, and having reached the highest point he can attain, he there lies basking in the sun in perfect repose. The frivolous young seals gambol and snort, and carry on great games, while their mothers sleep peacefully, with their snouts pointing heavenward, and their heads pillowed on their own natural bolsters of fat.

Sometimes a grave old grannie curls herself up, that she may the better scratch her head with her hind-flipper —a ludicrous position, as you will know, if you have ever observed a cow scratching her nose with her hind-leg! Besides these sea-lions, the rocks are haunted by various wild sea-birds; grey pelicans and black cormorants sit solemnly perched on the crags, while white sea-gulls circle around with shrill piercing cries, which blend with the roaring of the seals and the beating of the surf on the rocks.

This was a scene after my own heart; and as seen with the aid of my dear old opera-glasses (inseparable companions of all my wanderings), I could discern every movement and expression of each individual in the herd (though I cannot pretend to have observed the external ears which distinguish these from other seals). Surely such a spectacle, seen from such comfortable surroundings, must be unique. I happened, on returning here, to express

my delight with the scene, and some smart town-bred San Franciscan ladies looked at me with pitying wonder. They were in the constant habit of driving to the Cliff House, but not for love of the sea-lions!

There is another group of rocks, about thirty miles from here, which is also tenanted by these creatures. These are the Far-allones—precipitous masses of white granite. We sailed very near them the night we came in, and could discern a multitude of dark creatures moving on the white rocks, which gleamed so coldly in the moonlight. Their name is legion. Happily they have such poor fur as to possess no commercial value; hence their impunity. The gulls, which are there in myriads, are less fortunate. Their eggs command a ready sale in the market, and countless thousands are annually carried to San Francisco, and there consumed. The advent of the egg-collectors is gladly hailed by the lonely watchers in the Far-allone lighthouse, to whom the presence of other human beings must be a rare interest.

On our homeward way, we came by the Lone Mountain Cemetery—the great burial-ground for the city. It takes its name from a lonely sandhill within the Roman Catholic Cemetery. A great cross crowns the hill—a solemn symbol, visible from afar. Now, this region is all peopled with the quiet dead, and a multitude of graves occupy the hilly ground overlooking the harbour. It is a fresh, breezy spot, fragrant with the choicest garden flowers, which loving hands have planted round their dead, and which flourish and spread in rank luxuriance; roses, jessamine, and

honeysuckle festooning the monuments and railings, while fuchsias, geraniums, pinks, lilies, and violets run riot in their rich profusion.

This graceful consecration of flowers extends even to the names given to the winding paths; and Acacia Avenue, Lily Path, or Rose Walk are the inviting titles which distinguish different portions of God's acre. It is a pleasant resting-place, marked by no grim formality, rather suggesting a quiet shrubbery, with graves grouped here and there in grassy glades, overshadowed by fine old ilex or "live oaks," as they are here called. The eucalyptus, cypress, mimosa, and other trees and shrubs, have taken kindly to these once barren sandhills, and now form shady groves and rich clumps, and will, in a very few years, become stately and beautiful trees; while some palms and cactus give almost a suggestion of the tropics. So the last home of the sleepers is an embodied idyl; flowers, and sunlight, and quiet green hills overlooking the great calm haven, fading away in a hazy mist which veils the distant hills. I think, however, that the poetry of death receives a rude shock from the very artificial treatment of the dead. I am told that here the pure white shroud is well-nigh a thing of the past, and that the frivolities of dress are never more carefully considered than in the solemn presence of Azrael.

There is more to be said in favour of the term "casket" to describe a beautified coffin. It reminds me of a certain family mausoleum in Scotland, whose owner always spoke of it as "his jewel-case." He had therein enshrined four wives!

Concluding Note.

Progressive America objects to our old-fashioned lugubrious coffins, which are now very generally discarded in favour of highly ornamental "caskets," in which the suggestive form of a coffin is ignored. An oblong box of uniform width is made of the most costly woods—satin-wood or polished oak—with silver mountings. It is lined with silk or satin, and the head of the sleeper is laid on a satin pillow.

The lid is partly glazed, that all friends may be privileged to take a long last look at the dead—a doubtful boon when so cruel a tyrant as Change rules the hour; but his work is stayed for a little season by various artificial means.

These æsthetic coffins apparently rank as things of beauty, pleasant to look upon, to judge from the following account of a Chicago Industrial and Fine Art Exhibition :—

"A brilliant spectacle was presented, as the gleam of electric lamps was shed over gay costumes and richly furnished stalls; among which latter, not the least showy was that of an enterprising undertaker, prepared to gratify the most sumptuous taste in the matter of coffins. Looking at this display of 'caskets,' as they were euphemistically styled, in polished marbles and other ornamental materials, it was not surprising to hear that a common practice in the States is to send the dead to their long homes decked out in fine raiment of fashionable cut, and with moustaches waxed, and nosegays in their button-holes."

Apparently the coffin department holds its place in all exhibitions of art and industry, for a gentleman returning from the Philadelphia Exhibition told me that he had overheard two ladies discussing the exhibits, and they agreed that the Funeral Department was quite the most interesting. Said the first, "Oh, that lovely casket of delicate blue velvet lined with pale-rose

satin, so beautifully quilted!" "Well," said the other, "for my part, I preferred the black velvet with crimson velvet lining. You know crimson is so becoming to a corpse!"

While England is discussing how she can most simply dispose of her dead, and the "Economic Funeral Company" advertises its claims to the gratitude of the multitude of mourners whose grief is only embittered by the pressure of expensive ceremonial,—the undertakers of America are thriving, and vying one with another in every extravagance which can be encouraged by their sad profession.

They have a monthly magazine of their own, called 'The Casket,' which has already been running for several years, and is illustrated with portraits of the leading undertakers—"The Monarchs of the Road," as they call themselves. This periodical is the advertising medium of all the great funeral establishments, and of the inventors of various methods of embalming. Drugs for this purpose are advertised, for the use of families which incline to domestic experiments, and full directions for use are given, and for all the ghastly processes of thus manipulating the loved remains.

With a happy consciousness that few relations would care to usurp these "professional" functions, the great establishments advertise their readiness, at any moment of day or night, to send out a competent staff to take charge of all details. All that is required is a hint as to the "style" preferred, and the special method by which the body is to be prepared. The director-general and his assistants will take good care that all is done in first-rate "style."

The Antiseptic Embalming Fluid is highly recommended. "It preserves the body without destroying the identity of the features; it removes discolorations, restores the skin to its natural colour, prevents the formation of gases, and acts as a preservative in all kinds of weather without the use of ice.

By a more revolting process, minutely detailed, the body, after being plunged into a bath of salts of alumina, is filled with a liquid, described as "The Egyptian Embalmer—a never-failing preservative."

As a matter of course, 'The Casket' revels in descriptions of elaborate funerals, giving details as minute as the records of fashion in a Court Journal. All the splendours of costly material are enlarged upon, and estimates of the sums which have been expended—which in some cases have been made to mount up to 10,000 dollars (£2000)!

But it is not only this journal of death which luxuriates in such details. Here is an extract from a New York paper on the last toilet of a lady:—

"Miss R., the deceased, was laid out in white rep silk, elegantly trimmed with white satin and very fine point-lace. The skirt was draped with smilax and lilies of the valley. The casket was made to order by the Stein Manufacturing Co. of Rochester, in their celebrated Princess style. It was covered with the most delicate shade of blue silk velvet, with corners and mouldings tufted with white satin. The inside was trimmed with white satin, and with very heavy sewing-silk and bullion fringe. The handles were long bars covered with sewing-silk. The casket opened at full length, the inside of the lid being tufted with white satin. Miss R. looked very natural, more as if asleep than dead. There was a splendid display of flowers, sent as tokens of sympathy from her many friends. All the stands containing the flowers were covered with white, giving a general appearance of purity."

Nor is such care for personal appearance bestowed only on the young and beautiful. Grave citizens, whose influence on their fellows has been due to far different qualities, are now consigned to the hands of "artists," who relieve the ghastly pallor of death by a judicious application of rouge, and the dead

man, in full evening dress, with costly studs on snowy shirt-front, white gloves, and a necktie that Beau Brummel might have envied, lies in state to receive the last ceremonial visit of all his friends and acquaintance.

In further illustration of a subject which to English ears sounds so painfully artificial, I think the following passage from 'The San Francisco Sunday Times' is sufficiently curious to be worth preserving:—

"'Funerals are very troublesome affairs,' said the head of a leading undertaking establishment to a 'New York Mercury' reporter who accosted him on the subject, 'for the reason that the mourners are never on hand, and you are kept always an hour behind time. The only time we have things as we wish, is when we are notified to come and take charge of the remains. Then we have all to say, and can proceed with our work without delay.'

"'How do you prepare remains generally?'

"'We first find when the body is to be buried, then place it on ice and secure the order for the coffin or casket; then on the morning or afternoon previous to the funeral, we go to the house and place the body in the casket, after first nicely dressing it, and combing the hair, and making all as favourable to the eye as possible.'

"'Suppose the person had died a violent death, or in some way the features became repulsive to the eye, what would you do?'

"'In that case we would resort to the art, or I might say the secrets, of our profession. For instance, if the mouth could not be closed, we would sew the lips together, on the inside, or else secure them to the teeth with thread. I can tell you of any number of curious cases I have had. Only a few weeks ago, the sister of a well-known lady who had died a maiden, came to me and said, "I have come myself to give you the



order for my sister's funeral, because there are some arrangements to be carried through, which she requested me to have strictly followed. I want you to engage an artist to come to the house. She died from the effects of consumption, and is very pale. Her face must be made to look as natural as possible. Her lips are blue: I want them made red. Her suit to wear in the casket is now being finished by the dressmaker, and your female attendant must be careful about putting on the dress, because it is made to fit her as if she was in full life."

"'Well, I went to the house on Fifth Avenue the next day: my artist began his work, and when he was through, my woman attendant carefully dressed and laid out the body in the casket. When the artist and myself entered the parlour and looked at the remains, it was wonderful! The dress of the woman was fit to be worn by a princess as a bridal suit. She was adorned with jewellery, and upon her head rested a wreath of lilies, while her hands were encased in white kid gloves. Her age was forty-three years; she then looked eighteen. Her outfit was composed of fine corded white silk, trimmed with Valenciennes lace, and looped up at the sides.'"

After revealing various other family secrets, the reporter gives some ghastly details of embalming as occasionally practised in the States. He then goes on to quote some remarks of another well-known undertaker:—

"'I handle corpses of every kind, from those of wealthy gentlemen to those taken from the Morgue and saved from pauper's graves. I don't do much embalming, but I have the most curious orders for furnishing some funerals. Only a few days ago I received an order to furnish a shroud of pure white satin, scolloped about the bottom, and with silk rosettes up the centre to the neck-front, which was to be turned back so that the breast could be seen uncovered nearly to the waist. This was for a young woman about eighteen years of age, who died

after a short illness. She had not fallen away much, and still preserved unmistakable signs of having been a beautiful-looking girl while in life. Her husband, an old Southerner, stood near her casket, and I saw him touch her face with his handkerchief. When I approached the remains I at once noticed that her eyelashes and eyebrows had been pencilled, and her cheeks and lips painted. The poor old fellow was wild at losing his young bride. I thought at first she was his daughter, but at the hotel I was soon informed that she was his second wife.'

"'How do you find the business now in comparison with that of former years?'

"'People are not so lavish about flowers, but a great deal of "style" is wanted about the corpse. Some few years back a body was seldom robed in anything but a shroud; *to-day shrouds are hardly used except by Catholics and Hebrews.* Gentlemen, as a rule, are laid out in a full suit of black cloth, a white shirt, and black necktie, the hair and moustache or whiskers being arranged to suit. I have known of instances where a dentist has been ordered to place a set of false teeth with a $20 gold plate in the mouth of a dead woman to save her looks.'

"'Is the parting scene as affecting as formerly?'

"'No, that has changed for the better. People are becoming toned down. Old-time screeching and crying is dying out.'"

This is indeed the unpoetical side of the picture, as seen from a professional point of view.

Extremes in all fashion generally lead to a reaction, and it would appear that funerals are no exception to this rule, for I am told that the leaders of society in New York now affect extreme simplicity, and have declared in favour of pure white shrouds and ordinary coffins.

Moreover, to so great an excess had the custom of sending flowers to the house of the dead been carried, that the announce-



ment of a death is now frequently accompanied by a request that friends will send no flowers. The multitude of these ceremonial offerings had become embarrassing, and extra carriages were required to convey them to the grave. Thus the funeral car of Mr Stewart, the famous millionaire, was followed by six carriages filled with floral offerings. (A few days later, the poor corpse thus honoured was stolen from its grave, and has never been recovered.)

The customs which here regulate prolonged periods of mourning, would be considered sorely lugubrious in Britain. For parents, three years of the deepest dule is requisite before any shade of lighter mourning can be sanctioned, and for brothers and sisters nearly as long a period; and any wish to join in the simplest social pleasures is deemed lamentably frivolous.

Perhaps the long mourning may be better tolerated in America, inasmuch as families are, as a rule, so much smaller than those in the mother-country. But relations by marriage are soon disposed of, and mourning for a father- or mother-in-law is a short matter. But occasionally American free strength of mind triumphs, and, shaking off these conventional trammels, contrives to dispense with all the trappings of woe with a velocity very startling to more rigid neighbours.

CHAPTER II.

SPANISH NAMES — TRACES OF THE EARLY MISSION — SAN RAFAEL — THE COAST RANGE — REDWOOD FOREST — A CHAIN OF VOLCANOES — A PARADISE OF FLOWERS — POISON-OAK.

SAN RAFAEL, *April* 26, 1882.

DEAR NELL,—People may well say this is but a small world. It is only four days since I landed in San Francisco, without the slightest expectation of seeing one "kent face," and lo! there immediately appeared a friend from Sussex, whom I now discover to be a true old Californian, a magician, who has made my way all plain. He left me, determined to find a pleasant companion to be my escort to the Yō-semité Valley. Who should come to his house that very day but Mr David, whom I supposed to be safe in Morayshire! It appears that he came to California a good while ago, and has been so entranced by sport and fishing, that he has never been able to tear himself away!

At last, however, he wishes to visit Canada; but feel-



ing that he really could not leave California without seeing the Yō-semité, he came to the town to make arrangements for so doing, and was greeted with the news of my arrival. A few minutes later he was giving me screeds of home news, having just received long letters from several members of my family. As a matter of course, he at once assumed all the troubles and duties of escort. We hear that the roads to the valley *are* open, so we have every prospect of a delightful expedition. Is it not a strange piece of luck to have thus "happened" on a stanch old friend of thirty years' standing, in this New World? I am to rejoin him at San Francisco this afternoon, and make our start from thence.

I have been for two days in this pretty town of pleasant villas and gardens, surrounded with very green grassy hills. It is one of the numerous suburbs of San Francisco, each of which is in itself a large and important town. San Rafael, San Pablo, Saucelito, Oakland, Brooklyn, Alameda, San Leandro, San Lorenzo, San Mateo, San Bruno, San Miguel, Milbrae, Belmont, and Redwood City, are a few of the flourishing young children of this wonderfully prolific young mother.

Those I have named all lie within about an hour by steamboat or rail, and are the homes of a multitude of men whose business requires their daily presence in the crowded city, but whose wealth enables them to create most luxurious semi-country homes in a more genial climate than that of San Francisco, which is exceptionally disagreeable, as compared with that of California in gen-

eral. There are few days which do not ring the changes on pleasant, enticing sunshine, and treacherous, chilling sea-fogs. These are driven down the coast by the trade-winds; but as they rarely rise above a thousand feet, the Coast Range acts as an effectual barrier for their exclusion, till they reach the Golden Gate, through which they sweep as through a funnel, and the heated air in the bay suddenly becomes clammy and chill; and the rash stranger, who had been enticed by the brilliant morning to go out without warm wraps, is conscious of piercing damp, and shivers involuntarily. The old inhabitants tell you that it is rarely safe to sit for long at an open window, and that there are few days in the year when it is not desirable to have a fire morning and evening, though there is ample warmth *while* the sun shines. They say, too, that neuralgia and rheumatism, in all their painful phases, are only too common.

I daresay you are as much astonished as I am at the multitude of saintly names in this part of the world. They are all reminders of the old Spanish Mission, which seems to have dedicated some corner to every saint in the calendar, lest any should feel neglected!

The Jesuit Fathers found their way to Lower California in the year 1697, and established various mission stations, where they worked with considerable success for nearly a hundred years, till Charles III. of Spain decreed that even in this far country they might not dwell in peace. So they were expelled, and their settlements were made over to the Franciscans. Eventually these gave way to the



Dominicans, who remained in exclusive possession of Lower California, the Franciscans retiring northward, marking their pathway by the saintly names sown broadcast over the land.

The members of the mission do not seem to have penetrated beyond the Sierra Nevada; at least I can only hear of one inland town having been canonised—namely, San Carlos. Even in the great fertile San Joaquin Valley, there are very few names which suggest a Spanish origin.

But all down the coast, from San Francisco to Mexico, the strip of country between the sea and the low Coast Range is entirely given over to the saints; and you pass from Santa Clara to San José (which is pronounced Hozay), Santa Cruz, St Paul, St Vincent, San Benito, San Lorenzo, Santa Lucia, Santa Margarita, San Luis Obispo, San Mauelilo, Santa Rese, San Inez, Point Concepcion, Point Purissima, Jesu Maria, Santa Maria, Santa Barbara, San Sisquac, San Francisquitto, Los Angeles, Santa Monte, San Pedro, San Diego and San Diegnito, San Bernardino, —and so on *ad infinitum*. All the islands are similarly dedicated to Santa Cruz, Santa Barbara, Santa Catalina, Santa Rosa, Santa Ana, Santa Clara, San Miguel, San Nicolas, San Clemente, &c. &c. Among the mountains are the Sierra Sangre de Christo and Sierra Miguel; and of rivers we find Rio Virgin and Rio de los Dolores.

The preachers of the Cross found no lack of work, for there was at that time a very large Indian population throughout the whole region; and even so late as 1823, the Indians of California were estimated by various author-

ities at upwards of 100,000. But from the time when white men invaded the land, the aboriginal inhabitants rapidly decreased (no wonder, when they were shot down as ruthlessly as the herds of wild bison!), and the census of 1863 found only 29,000 Indians remaining. This number is not supposed to have diminished much; but of course it is difficult to obtain an exact census of so nomadic a race.

However, to return to San Rafael. I came here on a visit to a most hospitable Scot, a partner of my original friend. His charming home is only about an hour's journey from San Francisco; but it involved travelling by tram, steamer, railway, and carriage—or (to express myself correctly) we had a ride in the street car, a ride in the steamship, a ride in the steam-cars, and a ride in a carriage. If we *really* had occasion to ride, we should talk of "riding horseback," as a necessary distinction. We exchanged the steamer for the train at St Quentin (yet another saint!).

It was truly pleasant to be welcomed to this cosy, home-like nest, just like an English country-house, except that the roses are here in such profusion as they rarely attain in the old country. They climb over tall shrubs and droop in clustering masses of crimson and white, fragrant and most beautiful. Gardening in this country must be a delight; and when I look at the almost spontaneous growth of everything here, my thoughts go back to our poor little garden in Fiji, and to all the pains expended on it for such small result in the way of blos-



som. Here, as in Australia, all manner of plants grow happily side by side, and make no difficulty about acclimatisation. The loquat and the lemon grow beside English oak and ivy, and the ground is carpeted with violets and lilies.

Yesterday my kind hosts had arranged a cheery picnic-party to a very pretty artificial lake at the foot of Mount Tamal Pais. Though barely 2600 feet in height, it is the great landmark hereabouts. It lies six miles south-west of San Rafael,—a very beautiful drive through hilly country, all spurs of the Coast Range. In the freshness of this early spring, all the bare slopes are of the most vivid green, just the colour of young rice-fields; while the canyons are clothed with fine timber, including many trees which were to me unfamiliar.

Of the latter, one of the most abundant is the madroña, which is peculiar to the Coast Range, and literally found nowhere else. It is a kind of arbutus, with dark glossy foliage, and rich clusters of white blossom like tiny bells. Its stem is of a glossy red. The madroña ranks as a first-class forest-tree, occasionally attaining to a height of fifty feet, and a diameter of from six to eight feet. Its bark always retains a warm chocolate colour, very pleasant among the forest greens; and in the spring-time the tree is dear to the brown honey-bees, who find stores of treasure in its countless branches of small wax-like white blossoms. The manzanita is another relative of the arbutus, but it flourishes throughout the State.

The Coast Range also has a monopoly of the stately

redwood cedar,[1] which belongs exclusively to the forest belt lying within the influence of the Pacific sea-fogs. One man's meat is said to be his neighbour's poison, and I think the proverb applies to the beautiful trees which are nourished by the damp chilling sea-mists. Formerly many of the hills near San Francisco were clothed with the beautiful redwood; but it was found so valuable for building purposes, that the primeval forests have now entirely disappeared from the neighbourhood. One advantage is, that it burns very slowly; so its use somewhat lessens the danger of fire. No other tree splits so true to the grain, or is so much prized by the lumberer; none better resists the action of damp and decay. Naturally, therefore, it is a favourite wood with the builders; and so the forests near San Francisco now exist only in the form of houses or railroad timber. And still the work of destruction goes on, and north and south the lumberers are busy felling the beautiful growth of centuries, to be turned to common use.

I am told that these redwood forests are perhaps the most stately in the world, almost more beautiful than the Big Tree groves, and not very far behind them in size. Many individual trees measure from 60 to 80 feet in circumference—some are found ranging from 90 to 100—and from 200 to 300 feet in height. One has been proved to be upwards of 344 feet high—a glorious spire. Much of the characteristic beauty of a redwood forest is attributed to the fact that it generally grows alone, not mixed with

[1] *Sequoia sempervirens.*



other trees; so that thousands of these beautiful stems are grouped like so many pillars, averaging from 8 to 12 feet in diameter, and marvellously straight and tall. These grand cinnamon-coloured shafts lose themselves in a canopy of rich deep green, which almost hides the sky. And no sound breaks the solemn silence but the distant muffled roar of the surf beating on the sands.

One group of these great trees, on the road between San José and Santa Cruz, has been converted into a quaint hotel! Here is its description, taken from a local paper: "Imagine ten immense trees standing a few feet apart, and hollow inside; these are the hotel,—neat, breezy, and romantic. The largest tree is 65 feet round, and contains a sitting-room. All about this tree is a garden of flowers and evergreens. The drawing-room is a bower made of redwood, evergreens, and madroña branches. For bed-chambers, there are nine great hollow trees, whitewashed or papered, and having doors cut to fit the shape of the holes. Literature finds a place in a leaning stump, dubbed 'the library.'"

Far more startling is the account given in another Californian paper, of a railway viaduct in Sonoma County. Between the Chipper Mills and Stewart's Point, where the road crosses a deep ravine, the trees are sawed off on a level, and the roadway of rough timber is actually laid on these growing pillars. In the centre of the ravine, two huge redwood trees standing side by side have been cut off 75 feet above the ground, and form substantial central

columns for the support of the railway, across which heavily laden timber-cars pass securely.

A very small number of redwoods have been found in Oregon; otherwise the *Sequoia sempervirens* (like its big brother, the majestic *Sequoia gigantea*, which English people so obstinately and unreasonably persist in calling *Wellingtonia*, to the just annoyance of the Americans) is essentially and exclusively Californian,—the former refusing to live anywhere save on the Coast Range, the latter equally rigid in its allegiance to the Sierra Nevada. Of course I allude to the natural habit of these trees. The multitude of flourishing young specimens now growing in Britain and elsewhere, prove their willingness to live in other lands; but many a long century will elapse ere these young generations can attain to even the same character as their noble ancestors.

I do not know whether it is merely an ingenious derivation or a fact, that California owes its name to the pine-forests which form so marked a characteristic both of its shores and mountains. The theory rests on the Spanish word for resin being *colofonia;* and the idea is, that the State may have been so named by the early Spanish missionaries. Another suggestion is, that the name was derived from *caliente fornalo*, a heated furnace, in allusion to the blazing heat of the summer.

It really is pathetic to hear of the wholesale destruction of these grand forests, which year by year are mowed down wholesale by the lumberers—men whose one thought in connection with trees is, how many feet of timber they



will yield. A good redwood forest yields about 800,000 feet to the acre; but one large tree, eighteen feet in diameter, will give 180,000 feet.

Some years ago, a tremendous storm flooded the rivers in Northern California, and a vast number of huge logs were carried out to sea for a distance of 150 miles, greatly to the peril of ships, as you can well imagine, seeing that they averaged from 120 to 210 feet in length, and some were ten feet in diameter. Many of these poor battered logs drifted back to the homes of their youth—the shores of the forests whence they were hewn, on the Klamath and Redwood rivers; but many were cast ashore near Crescent City, where they were turned to good account. Sometimes great logs thus drift far, far away from land, and the ocean-currents sweep them onward till they reach some distant shore, and are hailed as an invaluable prize by islanders to whom such giant stems are unknown. Thus, when Vancouver visited Kauai, the northernmost of the Hawaiian Isles, he noticed a very handsome canoe upwards of sixty feet in length, which had been made from an American pine-log, that had drifted ashore in a perfectly sound condition. The natives had kept the log unwrought for a long time, hoping that the tide might bring them a second, and enable them to make such a double canoe as would have been the envy of the whole group; but for this they had waited in vain.

I am strongly advised not to leave this coast till I have seen some of these northern forests, in Mendocino and Humboldt counties, and still farther north in Oregon,

where there is a warm damp tract of country, favourable to a most luxuriant growth of all green things, from ferns to forest-trees. Damp it may well be, as it is said to rain there for thirteen months in the year!

I am told that *if* I care for beautiful scenery, I must at least sail up the great Columbia river, which divides Oregon from Washington territory, and (passing by Portland and Fort Vancouver) stay a while at The Dalles—a dry and dusty region—where the broad beautiful river crosses the Cascade Range; a chain which, though green and pleasant to the eye, is one great mass of lava and basalt, on which are built up a series of grand volcanic cones, one of which, Mount Hood, lies close to The Dalles. It is upwards of 12,000 feet in height—a perfect cone, generally robed in snow,—a thing of glittering light, appearing like a vision far above the clouds.

On the other side of the river, stretching away to the north towards Puget Sound, stand a whole regiment of these great cones—like sentinels guarding the range. Of these the principal are Mount Rainier, St Helen's, Mount Baker, and Mount Jackson. To the south lie Mount Jefferson, Diamond Peak, Black Bute, and, southernmost and grandest of all, Mount Shasta, a lonely, majestic mount, crowned with eternal snow, and towering from a broad base of dark pine-forest to a height upward of 14,000 feet.

Certainly the expedition to the Columbia river sounds tempting, and would be a very simple one—all straight sailing, or rather steaming, as regular steamers are con-



stantly plying along the coast. However, for the present, my face is steadfastly turned towards the Granite Crags of Yō-semité, and thence to the Fire Fountains of Hawaii.

The redwoods have led me into a long digression. I meant to tell you of the amazing profusion of wild flowers, which make this country like a dream of fairy-land. Nowhere have I seen anything approaching to it, though I fancy that the plains of Morocco in spring must be of much the same character. Here, the meadows and the hills alike are literally a blaze of scarlet, gold, and deep blue, from the sheets of what we only know as garden flowers. In the deepest ravines flames of vivid colour shine through the gloom, lighting up every dark chasm with bright-hued blossoms, such as we cultivate carefully in greenhouses. Here they grow spontaneously, and look comfortable and quite at their ease. Some are on a magnified scale as compared with their garden cousins; others, again, are somewhat stunted, but have a wild charm of their own, which to me is ever lacking in artificially educated plants.

Yesterday's expedition was one long succession of delightful surprises, as each step revealed some dear old friend snugly at home. We collected treasures till we could carry no more. I gathered specimens of fully a hundred different kinds, though as to giving you their names, that is quite beyond me. I am told that in the course of a Californian summer, six hundred different flowers can be collected. But, just to give you a general idea of the sort of thing, there are, first of all, the various

lupines I have already mentioned as covering the sand-hills for miles, with a dense carpet of delicate colour—pink, white, and blue, lemon and gold.

Next come the larkspurs, deep blue or pure scarlet; the pale blue nemophila, and the large white variety with purple spots; scarlet columbine, sweetly perfumed musk, yellow borage, scarlet lychnis, yellow tulips; pentstemons, blue and scarlet; Indian pink, heart's-ease, blue forget-me-not, crimson and scarlet "painted cup," dwarf sunflower, saxifrage, southernwood, and a most graceful kind of fritillaria, bearing a cluster of six or eight bells on one stem.

I saw some blossoms of the lovely *Trillium album* with its three snowy petals, also a kind of starry clematis trailing over the brushwood. In the open glades the eschscholtzia lies in broad patches of glowing orange on the park-like slopes. Of the humbler blossoms, one new to me is a lovely little yellow flower, with a brown heart like a pansy. It is called the Californian violet—a variety, I suppose, of the dog-tooth. Never before have I seen Tennyson's words so well illustrated, for truly

"You scarce could see the grass for flowers."

Along the sedgy water-courses I found bright blue dwarf iris, and delicate yellow mimulus, golden ranunculus, and myosotis. In short, lovely darlings without number.

It was a great delight to me to find the jovial round face of the familiar sunflower beaming a cheery welcome to its Californian birthplace, but we only saw a few



blossoms. I was told, however, that there are tracts in the mountain districts to the south where, for miles and miles, successive ridges gleam like gold, owing to the myriads of these gigantic yellow daisies—all of the dwarf kind, and so closely packed that there is no green to be seen, only a sheet of saffron hue. The same glory overspreads southern Colorado, where purple asters also abound; and both grow so freely, that they even spring up from the turf sods with which the miners roof their huts, giving quite an æsthetic touch to the dingy camps.

Among the flowering shrubs I chiefly noticed the ceanothus or Californian lilac, with its scented spikes of pale-blue blossom; while here, as elsewhere, the wild honeysuckle excelled all else in fragrance, its trails mingling with those of perfumed wild roses, which festooned the scrub, and sometimes tempted us into danger.

For even in this floral paradise mischief lurks, under the guise of a very innocent-looking prickly oak, whose young scarlet leaves are attractive enough to tempt the unwary hand to pluck them—a rash deed, of which only a new-comer could be guilty, for all Californians shrink instinctively from the treacherous poison-oak,[1] which, with good reason, they regard with the utmost horror. It is the upas-tree of this region. Many people are utterly prostrated by merely breathing too near it. I suppose it gives forth some subtle exhalation which, to sensitive constitutions, really is poisonous. Certainly some persons are more readily affected than others; for whereas with

[1] *Rhus toxicodendron.*



many the slightest scratch from one of its prickly leaves produces boils and sores, very difficult to cure, others, finding themselves unawares in a thicket of the dreaded plant, have come home in fear and trembling, supposing they must assuredly be poisoned, and yet have felt no harm.

One thing certain is, that it is most poisonous in spring, when the milky sap is rising, and that if it comes in contact with broken skin, any bruise or cut, mischief is almost inevitable. Like that of the opium poppy, this sap, when fresh, is pure white, but becomes black on exposure to the air. Every one seems inspired with a charitable wish to save the new-comer from making this agonising discovery for himself—and many a kind warning has already been given me on this subject. This dangerous little shrub is a scraggy bush, of parasitic habit, inclined to cling like ivy to rocks and trees. It is a member of the Sumach family, and bears a leaf something between a bramble and a holly, but in no wise resembling an oak.

Like most other things, it is capable of being turned to good uses; and I am told that to the skilful homœopathic herbalist it yields a tincture valuable for sprains and rheumatism, and even useful in paralysis.

In exploring the bush, I was reminded of California's tendency to large growth by the enormous size of the gall-apples on the common oaks. I gathered a considerable number as curiosities, each as large as a goodly apple!

When we had gathered flowers to our hearts' content, and watched the blue jays and squirrels darting about, we



were ready to enjoy a capital luncheon spread under the trees, on the green turf; after which some went fishing on the large artificial lake,—which is, I believe, the reservoir for the use of San Rafael,—and the others walked round it, still in search of new flowers. We diverged a little, to experience the new sensation of hearing and talking through a telephone with people at San Rafael, distant eight miles. Then came the boiling of the kettle, and a cheery tea, followed by a delightful drive home and a pleasant evening.

This morning I was up at daybreak to write to you, that I may post this letter before starting for "The Valley." It is 7 A.M., and almost time for breakfast. Mine host, being a busy man, must make up for living so far from his work by leaving home betimes.

P.S.—San Francisco.—We returned here about 9 A.M.; and as we are not to start till 3.30, Mr David suggested that we should fill up the time by a visit to Woodward's Gardens, which are a combination of zoological and botanical gardens, gymnasium, skating-rink, museum, and anything else you can think of. To me the chief points of interest lay in the aquarium, where there is a charming fish with eyes like two large brass beads, and another with fleshy spikes all round his mouth. Several large tanks are occupied by sea-lions, captured at the Far-allones, and bought by weight, at the rate of three shillings (75 cents) per lb.!

The largest has spent seven years in the gardens. Cap-

tivity seems to agree with him, as he now weighs upwards of a ton! We watched him feeding, and felt convinced that he took a malicious pleasure in splashing the rudely staring multitude, including ourselves.

Now good-bye. We are just ready to start.—Your loving sister, C. F. G. C.



CHAPTER III.

START FOR THE SIERRA NEVADA—THE GREAT SAN JOAQUIN AND SACRAMENTO VALLEYS — WHOLESALE FARMING - ORCHARDS — MERCED — HORNITOS — PAH-UTE INDIANS — MARIPOSA VALLEY—CLARKE'S RANCH.

CLARKE'S RANCH,
NEAR THE MARIPOSA BIG TREES,
Sunday Evening, April 28.

WE arrived here this afternoon, having done more than "a Sabbath-day's journey," in that we travelled from sunrise till 4 P.M. ere we reached this haven of rest in the midst of a beautiful forest. We have had a magnificent drive, and found comfortable quarters awaiting us here in a cosy group of one-storeyed houses, with separate cottages for bedrooms—everything clean and pleasant, kind people, and none of the stiffness and *insouciance* of a regular hotel.

We are now 6000 feet nearer heaven than when I last wrote to you, and are fairly on the Sierras, which close us in to-night, and look down on us from above the tree-tops. I have just been watching a glorious sunset.

The tall pines stood out clear against the golden light like pyramids of burnished ebony; and long after the evening shadows had enfolded this peaceful homestead, the snowy peaks caught the last rays of the vanished sun, and towered, glittering, as if suspended in mid-air far above the mellow mist.

Then a clattering of hoofs announced the approach of a troop of horses and mules driven in from their forest pastures to their night quarters in the corral, to be ready for our use in the early morning.

Now it is so chilly that I am delighted to find a blazing fire of good pine-logs—pitch-pine I think they are called; anyhow, they burn cheerily, especially when a resinous knot blazes up with a bright clear flame.

I must tell you all about our journey so far. As you know, we left San Francisco on Friday afternoon. First we drove to the Oakland ferry, and a large steamer took us across the Bay of San Francisco to Oakland, which is one of the gigantic city's great babies—in itself a city of pleasant villas, which already numbers about 50,000 inhabitants, 10,000 of whom are computed to cross the ferry daily by the magnificent steamers which ply to and fro every half-hour.

It must be rather inconvenient for the San Franciscans always to have this break at the beginning or end of a journey; but everything is arranged like clockwork to facilitate travel. For instance, a Baggage Transfer Company took possession of our luggage at the hotel, and restored it safely on our leaving the train. I believe that



freight-cars are run bodily across the ferry; and a huge boat is now being built which will carry twenty such vans, and enough cattle to load twenty more, at each crossing.

This was my first experience of an American railway, so of course everything was novel, beginning with the engines, with their huge chimneys to allow of burning wood, and also the "cow-catchers" or projecting fence of iron bars, which is intended to sweep wandering cattle off the line—"varra awkward for the cow!"

Instead of carriages divided into compartments, as in England, the cars are very long, like a church aisle, with about a dozen seats—each fitted for two persons—on either side of a middle passage, along which any one who chooses may wander from one end of the train to the other,—a privilege of which so many persons take advantage, that they seem to be for ever passing and repassing, slamming doors, &c. Ladies go to the fountain to drink iced water, which is supplied freely in all carriages; gentlemen pass to and from the smoking-carriage; and men selling cigars, books, newspapers, fruit, and sweetmeats, endeavour to find customers among the passengers.

This extreme publicity doubtless has its advantages, in preventing any possibility of danger from bad or mad companions; nevertheless, I think a comfortable corner, in the seclusion of a luxurious English carriage, is preferable to even the much-vaunted Pullman cars, in which, as in the ordinary cars, you must perforce sit up all day without any support for weary head and shoulders. The

height of luxury is attained in the drawing-room car, where each passenger is provided with a comfortable arm-chair, which, though a fixture, is constructed so as to turn in every direction.

The railway carried us through the great San Joaquin Valley as far as Merced, a distance of 150 miles. As this may not convey very much to your mind, I may as well explain the lie of the land.

This grand State may be roughly described as a magnificent basin, encompassed on the right hand and on the left by mighty mountain-barriers. On the west, the low Coast Range runs parallel with the shores of the Pacific, while on the east towers the glorious Sierras, crowned with everlasting snows—a true Alpine range—in which upwards of a hundred peaks average 13,000 feet in height, while Mount Whitney, one of the southernmost points, attains nearly 15,000 feet.

The Coast Range only averages about 4000 feet, and its highest peaks are about 8000. The two ranges run parallel for a distance of 500 miles, then converge, both at the northern and southern extremities, thus enclosing the wide tract of level land which lies between these mountain-ramparts, and forming one vast fertile valley. This is watered by two majestic rivers, which rise among the blended spurs of the two ranges—the San Joaquin river in the south, and the Sacramento river, at the base of Mount Shasta, in the north. The San Joaquin flows northward, and the Sacramento southward, each receiving a multitude of tributaries. These two grand streams meet half-way in



the Great Valley, and together flow into the Bay of San Francisco, and thence through the Golden Gates to the Pacific.

From these rivers the northern half of the valley receives its name of Sacramento, and the southern half that of San Joaquin. Each of these valleys is on so gigantic a scale that the eye receives only the impression of a vast plain bounded by distant hills. Each is about 250 miles long by forty in width,—an Elysium for farmers, where the fertile soil asks neither for water nor manure (here called fertilisers)—at least this is true as regards the northern valley; but in the central and southern region, where the rainfall is infinitesimal (in some places amounting only to from two to four inches in a year), artificial irrigation is found to be a necessity, and every spring and stream must be treated as a feeder for innumerable canals and ducts, which shall transform the parched and thirsty land into the richest green fields.

I am told that Sacramento Valley contains five million acres of arable land, which, however, produces heavy crops even in the driest years, and never needs irrigation. In proof of this, the case is cited of a year of great drought, notwithstanding which the oats (in fields of 1000 acres) grew so rank as to reach far above the head of an average man. The climate of Sacramento is mild, but winter has frost and occasional snow; whereas San Joaquin is rarely touched by frost, and the southern extremity of the valley is wellnigh tropical. Nevertheless it is necessary to wrap up young orange and lemon trees in thick cover-

ings of straw as a protection against possible autumnal frosts.

It is reckoned that (including the fertile foot-hills and small valleys to the south) San Joaquin possesses ten million acres of excellent arable land, of which scarcely one-tenth is as yet under cultivation, though many vast farms are already established, and some men hold tracts of 100,000 acres on lease from the State, all laid out in wheat.

One firm (Messrs Haggin, Carr, & Tevis) own 400,000 acres near Bakersfield, on the Kern river. They are said to have acquired this vast tract for a very trifling sum, as being an arid desert; but by the magic of irrigation they have already transformed much of it into fertile land, and now let it out on short lease in tracts of several hundred acres to small farmers, several of whom sometimes club to rent and work a tract in partnership. The owners supply the tenants with a dwelling of some sort, abundant milk, and the use of an artesian well, and receive one-third of the crops as their rent. In harvest-time this great firm employ about 700 labourers, to work agricultural machinery of every conceivable variety. They started one gigantic plough, which was to cut a furrow five feet wide by four deep, and was to be drawn by a whole herd of oxen: this, however, was found to be too large for practical use even in California!

Wheat-fields of from 1000 to 5000 acres are common, but occasionally a man of large ideas determines to outvie his fellows, so he makes one colossal field of many



thousand acres (I have heard of one field of 40,000 acres!). Of course this is considered rather speculative, as the failure of one such crop would probably involve ruin. But this great wheat-plain is exposed to comparatively few risks in this perfect climate.

I only wonder that half our farmers do not emigrate and settle here, instead of struggling year after year with our fickle skies. Here all moves as if by clockwork. In the beginning of December the land is just scratched over by gang-ploughs, which consist of six or eight ploughshares fastened to a strong wooden framework, drawn by eight horses. Its work is very superficial, merely turning over the upper soil. These ploughs have no handles, for the ploughman merely guides the team, and the ploughs follow. In front of them is fastened a seed-sower, which scatters the grain, and the plough lightly covers it. One such implement ploughs and sows ten acres a-day.

But on heavy soil, where deeper ploughing is necessary, a larger team is attached to fewer ploughshares, and gets over less ground. A separate machine is then employed to sow the grain, scattering it forty or fifty feet, and getting over 100 acres a-day. After this the ground is harrowed, and now (in the end of April) the crop is well grown, and the country is all one sheet of the loveliest green. Much of this wheat and barley has been sown for present use as fodder, or for hay, and is now being cut; and the same ground will, in the end of June, be planted with maize, and will yield a second heavy crop, sometimes (especially if the land is irrigated) growing to a height of eighteen

feet, and yielding ninety bushels to the acre, in the form of immense corn-cobs.

If, instead of cutting the wheat green, it is left to ripen, it is fit for harvest by the end of May; and as there is no rain after April, during the whole harvest season the farmer has no anxiety, but works at his leisure, requiring no barns or granaries, nor fearing any injury to his grain from exposure to weather. With the aid of a machine called a "header," the wheat-heads are cut off on the field, and the straw is left piled in stacks. Three of these "headers," escorted by nine waggons to collect the heads, are worked by eighty horses and a couple of dozen men, and can easily go over 150 acres in a day. Sharp harvesting!

The grain is immediately threshed on the spot, and securely sacked; and the sacks lie in heaps in the open field, safe from all molestation, till the farmer finds leisure to remove them to the railroad, which is now open to the southern extremity of the Great Valley, and carries its golden crops to San Francisco, whence California's surplus goes forth to feed the nations of the world.

The crop having been thus secured, the field is next lightly ploughed over, only to a depth of about three inches, just to turn in the dropped grain. Perhaps a little more is added, and ere long a "volunteer crop" springs up, which is even more profitable than the first, having cost less.

Most of these particulars, and many more which I cannot recollect, were given me by a most comfortable-looking

farmer, who was our travelling companion as far as Merced, up to which point we were passing through a corner of the vast wheat-field, which runs north and south for a distance of about 600 miles. Throughout a considerable part of that wide expanse not a fence exists, except those running beside the railway, to keep off the cattle, which are turned loose to graze on the stubble after harvest. Here and there are scattered small farmsteads—homes of men who cultivate from 20,000 to 40,000 acres of this great wheat-plain.

My friend the jovial Californian farmer has land in the south, and says there is no such place in the world for a young fellow to settle, provided he is sent out to the special care of some experienced person, who can save him from buying his wit too dear. I thought of all "our boys," and for their benefit treasured the words of wisdom which he was so ready to impart.[1] All Californians seem to delight in giving statistics, by which to impress on one's mind the vastness of every detail. They are proud of their big country, as well they may be.

Years ago some one summed up the creed of the West in one clause—namely, belief in a Future State, that State being California! Now it is no longer a matter for faith, but a gigantic present reality, since her wheat-fields already supply the markets of Britain and Australia, and many another land.

Just imagine that this San Joaquin Valley alone has an

[1] I have, however, deemed it advisable to add various details of more recent progress.

area of 24,000 square miles of fertile soil, all of which was, till recently, given over to cattle and horses—rich pasture-lands for vast herds. Multitudes of "cattle-kings" thus amassed wealth without owning one acre.

Now, however, this old order changeth, and small farmers (a class known as *pre-emptors*,[1] and hateful to the cattle-kings) are allowed by Government to pick out desirable tracts of 160 acres wherever they please, provided they at once settle on the spot and cultivate it. Many such small patches united, soon change the pasture-lands to broad wheat-fields; and so the great cattle-owners, who have heretofore reigned supreme, and fed their countless herds at large, though without any definite right to do so, must now either herd their flocks so as to prevent their trespassing on unfenced farms, or else drive them farther south into the mountain districts.

Practically, however, it is found so impossible to enforce these conditions, that most farmers are driven to fencing in their lands, as their only sure protection. The immense firm whom I mentioned as owning 400,000 acres, have thus expended £100,000! Pretty well for one item of outlay!

Nor can it be supposed that the *pre-emptors* are always

[1] The *pre-emptor* of California answers to the free-selector in Australia. Both are alike hateful to the original settlers, and both have a fair opportunity of doing well for themselves. The free-selector in Australia is allowed to pick out a tract of 640 acres, one square mile, wherever he pleases. He may select the best sugar-growing soil, which becomes his own on payment of twenty shillings per acre, divided over ten years. If he wishes for a smaller estate, he can take less. Such farming certainly seems to offer greater advantages than renting land in Britain.

allowed to take up their selected ground in peace. Many a hard struggle has there been on this subject. As a matter of course, the best lands, commanding good water-springs and streams, were the very first to be taken up, and the fortunate possessors jealously guard their water-rights; nevertheless, even these find that the wide, shallow Californian rivers cannot be relied on for a permanent water-supply, as many wholly dry up in summer, so that, in common with their less fortunate neighbours, they find the question of artificial irrigation a very serious one. In the last few years canals have been dug in all directions; and though this systematic irrigation is as yet only in its infancy, it is calculated that already upwards of 3000 miles of canals have been made in various parts of California.

Any land thus supplied rises enormously in value, and in Fresno county, lots of twenty acres are offered for sale at £10 per acre, the purchaser paying an annual water-rate of £2, 10s. for the use of as much water as he chooses to lead over his land from the main ditch. The price sounds high, but the returns amply repay it.

To those who are content to take the thirsty land as it stands, and make their own arrangements for irrigation, millions of acres are now offered by Government, at a low price, to induce settlers to cultivate it. It is, however, to be feared that in many instances the new-comer may find the water question a really serious difficulty, possession being, in such cases, something more than nine points of the law—in truth, a most stubborn fact, and one which has given rise to some serious fights.

Nevertheless, when I think of the toil which I have seen expended on clearing even a corner of a Highland farm to yield a miserable crop of oats, which might, as likely as not, have to be cut green in October, it sounds too good to be true, to know that here is rich soil, which needs no clearing of brushwood or drawing of stumps, no costly buildings, no barns, no storing even of fodder, for a quarter of an acre devoted to beets will feed two cows for a whole year, and an acre of *alfalfa—i.e.*, Chilian clover—will support ten sheep all the year round.

A quarter of an acre of alfalfa will yield sufficient hay to keep a cow. One sowing of this clover lasts for twenty years, and yields very heavy crops. Its roots pierce the soil till they reach water, and if the land is irrigated, it annually yields fifteen tons to the acre, being ready for cutting six times a-year!

Equally precious is the native grass, *alfilleria*, which is said to be the finest known food for cattle. The soil has only to be ploughed five inches deep, and, as if by magic, the land is clothed knee-deep in rich succulent grass, whereon the flocks and herds fatten and rejoice.

Does not the thought of starting a dairy farm in such a country strike you as a favourable opening for some of the rising generation?

Hardy people, accustomed to cold northern winters, declare that the climate of the south is so mild that fire is only necessary for cooking; but chilly folk crave a little artificial warmth both morning and evening. The little firewood required will, however, grow of itself in the farm

fences, which are merely sticks of sycamore, eucalyptus, and willow or cotton-wood. These being stuck in the earth in December, at once take root, and in the second year supply sufficient firewood for the kitchen. The eucalyptus grows from ten to fifteen feet in a year, and in the course of eight years, trees have been known to attain seventy-five feet in height, and four feet in diameter.

Everything else grows in proportion. A peach-orchard bears in the second year after planting; apples bear the third year, and yield a crop in five; while vines bear rich clusters of grapes the very same year that they are planted as cuttings. After two and a half years they yield five tons of grapes to the acre, and after five years the annual crop is ten tons to the acre, and the average market-price £4 to the ton.

Apparently the best paying farms, and certainly the most attractive as homes, are those which grow a little of everything; and while the household is abundantly supplied with all good things, the surplus of mixed produce finds a ready market in the omnivorous capital. My jovial friend had tried this himself, and found it answer, so now he recommends it to others. You can bear it in mind as a useful hint for some one or other.

Well, to return to our journey.

It was 10 P.M. ere we reached Merced, where we left the railway. We slept at a good hotel close to the station, which bears the name of El Capitan, in honour of a mighty granite crag in the Valley. The house was very full on

account of a ball, which was kept up most of the night, and somewhat disturbed my slumbers.

We were all ready for breakfast at six, when I had a pleasant and most unexpected meeting with an old friend from whom I parted three years ago in the coffee districts of Ceylon. He was just returning from the Valley, having been its first visitor this spring. A large open coach was waiting for us—fitted, said the proprietor, to hold twelve people and any amount of luggage. The fitness proved a tight fit, and supremely uncomfortable; but, like good travellers, we all made the best of it.

Seeing our baggage lying in the dust, Mr David, with marked politeness, requested the conductor to have it stowed away; whereupon the latter, also most politely, turned to an exceedingly shabby-looking hanger-on, saying, "Mr Brown, will you be kind enough to hand up *that man's* baggage;" whereupon Mr David told me of a gentleman who had said to a ragged, wretched-looking man, that he would give him two dollars if he would carry his portmanteau. "You will?" said the man; "I will give you an ounce [gold dust] to see you do it yourself!" which he immediately did.

We were particularly fortunate in the fellow-passengers who shared our section of the coach, and with whom we had already commenced a pleasant acquaintance. One is a naval officer, in command of one of her Majesty's ships; the other a French naturalist and sportsman, who has lived in Cashmere for the last twelve years.

With a team of six good horses, we rattled over the

ground, and tried to forget how we were being bumped and shaken, and to think only of the interests around us. When we escaped from the monotonous wheat-fields of civilisation, California was herself again—free, beautiful, wildly luxuriant; broad natural meadows, and gently undulating hills, all clothed in the fresh verdure of this early spring-time. The rich tall grass is of a peculiarly lovely light green, like reflected sunlight; you really envy the happy cattle which luxuriate in such pastures. And this exquisite groundwork blends in one harmonious glow the masses of brilliant scarlet and gold, crimson, purple, and blue, which are freely scattered on every side, as one flower or another has gained the mastery.

Now you pass a broad patch of yellow and orange, where the eschscholtzia reigns alone; then a belt of richest blue marks a colony of larkspurs; then comes a tract where a quaint scarlet brush divides the land with a daisy-like white flower; next a field of lupines: but all are embedded in the same delicate soft green, and to the eye appears smooth as a carefully tended lawn inlaid with flower-beds, though in truth both grasses and blossoms are growing in rank luxuriance, and the cattle stand more than knee-deep in these delightful dainties.

We halted for luncheon at Hornitos, at a house kept by a cheery couple from Glasgow, Macdougal by name—hospitable and friendly. Everything was very clean and good, and we were thankful to rest our battered bones, ere starting again to complete our twelve hours of violent shaking and jolting over loose stones, and roads not yet

repaired after their winter's wear, with holes here, and rocks there, and general bumping everywhere. We tried all possible devices to steady ourselves, and to avoid concussion of the spine, which really sometimes appeared inevitable. As it is, we have escaped with moderate bruises and contusions!

The afternoon drive was altogether beautiful, up hill and down, yet ever gaining ground, winding round about among the foot-hills, which in places are clothed with *chaparral* (the dense brushwood which includes so many flowering shrubs), and elsewhere are grassy and park-like, adorned with scattered groups of noble live-oak and buck-eye, which, being interpreted, are ilex and Californian horse-chestnut. And far and near, the grassy slopes were tinged with rainbow-hues, purple and blue and yellow; deep gold and crimson and scarlet, where the bright sunlight played on banks of wild flowers.

My attention was called to a curious little pine, scarcely recognised as such,[1] which grows abundantly in that district, and which, though not ornamental, is valuable to the Indians, on account of its bearing edible nuts, which they collect in autumn as part of their scanty winter store.

We have seen two or three parties of Pah-ute Indians, and have not been impressed with any admiration for these, the old lords of California. Some of the men were dressed in robes of rabbit-skin of a very peculiar manufacture. Instead of whole skins being stitched together, as in preparing an opossum rug, or an ermine or squirrel

[1] *Pinus sabiniana.*



cloak, these rabbit-hides are cut into narrow strips as soon as the animal has been skinned, the fur being left on.

Several of these strips are sewed together, to make up the length required for the cloak. Each strip is then twisted till it is simply a fur rope. These are woven together by means of long threads of wild hemp, or sinews of animals, or strips of willow bark, forming a sort of mingled material, in which the fur ropes act as "woof," and the hemp, or bark, is the "warp." Perhaps it would be more accurate to describe these curious productions as being a sort of network, inasmuch as the texture is so very coarse that you can pass your fingers through it at any point; at least, so I am told. I should be exceedingly sorry to experimentalise!

It must require a good deal of patience and trouble to manufacture one of these very unpleasant-looking garments; but once made, they are very durable, and stand any amount of wear and tear. They are the handiwork of the squaws, who, however, are apparently not allowed to wear such precious robes, but are generally wrapped in dirty blankets, while the fur robes adorn the braves, who do their part by catching the rabbits.

This they do by netting, on a very large scale. They prepare exceedingly long narrow nets, made of wild hemp or willow bark. These are set in the form of a great V right across some favourable feeding-ground, if possible in a pass or valley. The nets are set on the same principle as a seine for fish; the lower side is weighted, while the upper edge is upheld by sticks.

The favourite season for these rabbit-drives is the late autumn or early winter, when the first light snow has fallen. The nets being spread, two or three Indians remain on guard, while the others—men, women, and children—steal silently away, so quietly as not to disturb the ground. So they proceed for several miles.

Then forming themselves into a large semicircle, they return towards the trap, shouting and yelling, beating the bushes, and waving their blankets. The poor startled rabbits, greatly alarmed by this Pandemonium, scamper off towards the net, where the other Indians lie concealed; these suddenly start up with a wild yell, and so bewilder the terrified creatures, that they rush straight at the net, which is so coarsely woven as to let their heads well through. And thus the poor conies are held prisoners till their enemies arrive and secure them.

Then follows a great feast, and abundant material is provided for the manufacture of many robes. Indeed I am told that about 1000 rabbits have sometimes been captured in this way in one big drive.

The Indians also wage war on the large grey ground-squirrels, which dig holes in the earth, burrowing like rabbits. They are pretty animals, with a very large brush, and are said to be very good eating.

It was near sunset before we reached Mariposa Valley, which, in the old mining days, was a large settlement—a real gold-digger's town—but now has dwindled down to a mere village. The hotel was very full, but every one was most civil and obliging, and quarters were found for us,



We were too tired to be particular. After all, we had only travelled fifty miles since morning; but then twelve hours of incessant and violent tossing on the most angular of knife-board seats is a weariness altogether independent of mileage—and our route was all up and down hill, which gave us a chance of walking a good deal.

You can fancy nothing more "disjaskit" than a deserted mining town, with its desolate tumble-down shanties, once crowded with a mixed multitude of all nations, keen energetic men, whose whole longings centred in gold—the precious gold they hoped to extract from the Mariposa quartz-mines, which to so many proved a snare and a delusion. This was one of the famous gold-districts which passed through many vicissitudes; and the name of Mount Bullion still clings to one high summit, which was pointed out to us yesterday as we came through Bear Valley.

So these now silent forests once teemed with eager life, and passionate hopes and fears—and it all proved vanity and vexation of spirit: so the miners forsook these diggings, and went in search of more remunerative fields; and the wise among them turned their pickaxes into gang-ploughs, and reaped golden crops from the great wheat-fields, and grew richer and happier far than their pals who had "happened" on big nuggets, and then gambled them away, till they were left empty-handed, to begin life afresh.

This morning we made a very early start from Mariposa (which, by the way, I am told is the Spanish for a "butterfly"). Our road lay through more beautiful scenery, but

the jolting and the bumping were even more trying to our aching bones than they were yesterday; and we were thankful for an hour's respite when the coach pulled up for luncheon at a very clean little inn, kept by a tidy, pleasant couple, whose Cornish accent was at once detected by our naval friend, and great was their delight when they recognised in him a son of their old squire in Cornwall! They had much to tell and to hear in this tantalising short interview; but we had still a long drive before us, so had to be up and away.

At last we entered the true forest-belt, and anything more beautiful you cannot conceive. We forgot our bumps and bruises in sheer delight. Oh the loveliness of those pines and cedars, living or dead! For the dead trees are draped with the most exquisite golden-green lichen, which hangs in festoons many yards in length, and is unlike any other moss or lichen I ever saw. I can compare it to nothing but gleams of sunshine in the dark forest. Then, too, how beautiful are the long arcades of stately columns, red, yellow, or brown, 200 feet in height, and straight as an arrow, losing themselves in their own crown of misty green foliage; and some stand solitary, dead and sun-bleached, telling of careless fires, which burnt away their hearts, but could not make them fall!

There are so many different pines, and firs, and cedars, that as yet I can scarcely tell one from another. The whole air is scented with the breath of the forests—the aromatic fragrance of resin and of dried cones and pine-needles baked by the hot sun (how it reminds me of



Scotch firs!); and the atmosphere is clear and crystalline—a medium which softens nothing, and reveals the farthest distance in sharpest detail. Here and there we crossed deep gulches, where streams (swollen to torrents by the melting snow on the upper hills) rushed down over great boulders and prostrate trees—the victims of the winter gales.

Then we came to quiet glades in the forest, where the soft lawn-like turf was all jewelled with flowers; and the sunlight trickled through the drooping boughs of the feathery Douglas pines, and the jolly little chip-munks played hide-and-seek among the great cedars, and chased one another to the very tops of the tall pitch-pines, which stand like clusters of dark spires, more than 200 feet in height. It was altogether lovely; but I think no one was sorry when we reached a turn in the road, where we descended from the high forest-belt, and crossing a picturesque stream—"Big Creek" by name—we found ourselves in this comfortable ranch, which takes its name from one of the pioneers of the valley, though it is now kept by a family of the name of Bruce. It stands on the banks of the South Merced river—another pretty Spanish name.

Here we fell in with some friends from Scotland, who have just arrived here *vid* New Zealand. I must go and have a chat with them over the cheery wood-fire, which is blazing most invitingly—so now good night.

CHAPTER IV.

IN THE FOREST—SEQUOIA GIGANTEA—THE RED SNOW-FLOWER —YŌ-SEMITÉ VALLEY IN WINTER—A SNOW-SHOWER.

CLARKE'S RANCH, *Monday Night.*

WE have spent a long day of delight in the most magnificent forest that it is possible to imagine; and I have realised an altogether new sensation, for I have seen the Big trees of California, and have walked round about them, and inside their cavernous hollows, and have done homage as beseems a most reverent tree-worshipper. They are wonderful—they are stupendous! But as to beauty—no. They shall never tempt me to swerve from my allegiance to my true tree-love—the glorious Deodara forests of the Himalayas.

If size alone were to be considered, undoubtedly the Sequoia stands pre-eminent, for to-day we have seen several trees at least three times as large as the biggest Deodara in the cedar shades of Kunai; but for symmetry, and grace, and exquisitely harmonious lines, the "God-given" cedar of Himala stands alone, with its wide-spreading, twisted

arms, and velvety layers of foliage studded with pale-green cones,—its great red stem supporting a pyramid of green, far more majestic than the diminutive crown of the Big trees. So at first it was hard to realise that the Californian cedars are altogether justified in concentrating all their growing power in one steady upward direction, so intent on reaching heaven that they could not afford to throw out one kindly bough to right or left. They remind me of certain rigidly good Pharisees, devoid of all loving sympathies with their fellows, with no outstretched arms of kindly charity—only intent on regulating their own lives by strictest unvarying rule.

Great Towers of Babel they seem to me, straining upward toward the heaven which they will never reach.

There is nothing lovable about a Sequoia. It is so gigantic that I feel overawed by it, but all the time I am conscious that in my secret heart I am comparing it with the odd Dutch trees in a Noah's Ark, with a small tuft of foliage on the top of a large red stem, out of all proportion. And another unpleasant simile forces itself on my mind —namely, a tall penguin, or one of the wingless birds of New Zealand, with feeble little flaps in place of wings, altogether disproportioned to their bodies.

But this is merely an aside—lest you should suppose that each new land I visit wins my affections from earlier loves. The Deodara forests must ever keep their place in my innermost heart: no sunlight can ever be so lovely as that which plays among their boughs—no sky so blue—no ice-peaks so glittering as those which there cleave the

heaven; and I am sure that these poor wretched-looking Digger Indians can never have the same interest for me as the wild Himalayan highlanders—the Paharis—who assemble at the little temples of carved cedar-wood in the Great Forest Sanctuary, to offer their strange sacrifices, and dance in mystic sunwise procession.

Having said this much, I may now sing the praises of a newly found delight, for in truth these forests of the Sierras have a charm of their own, which cannot be surpassed, in the amazing variety of beautiful pines, firs, and cedars of which they are composed. The white fir, the Douglas spruce, sugar-pine, and pitch-pine are the most abundant, and are scattered singly or in strikingly picturesque groups over all the mountains hereabouts.

But the Big trees are only found in certain favoured spots—sheltered places watered by snow-fed streams, at an average of from 5000 to 7000 feet above the sea. Eight distinct groves have been discovered, all growing in rich, deep vegetable-mould, on a foundation of powdered granite. Broad gaps lie between the principal groves, and it is observed that these invariably lie in the track of the great ice-rivers, where the accumulation of powdered rock and gravel formed the earliest commencement of the soil, which by slow degrees became rich, and deep, and fertile. There is even reason to believe that these groves are pre-Adamite. A very average tree (only twenty-three feet in diameter) having been felled, its annual rings were counted by three different persons, whose calculations varied from 2125 to 2137; and this tree was by no means very aged-

looking—probably not half the age of some of its big relations, one of which (on King's river) is forty-four feet in diameter.

Then, again, some of the largest of these trees are lying prostrate on the ground; and in the ditches formed by their crash, trees have grown up of such a size, and in such a position, as to prove that the fallen giants have lain there for centuries—a thousand years or more; and although partially embedded in the earth, and surrounded by damp forest, their almost imperishable timber is as sound as if newly felled. So it appears that a Sequoia may lie on damp earth for untold ages without showing any symptom of decay. Yet in the southern groves huge prostrate trees are found quite rotten, apparently proving that they must have lain there for an incalculable period.

Of the eight groves aforesaid, the most northerly is Calaveras, and the most southerly is on the south fork of the Tule river. The others are the Stanislaus, the Merced and Crane Flat, the Mariposa, the Fresno, the King's and Kaweah rivers, and the north fork of the Tule river. It is worthy of note that the more northerly groves are found at the lowest level, Calaveras being only 4759 feet above the sea, while the Tule and Kaweah belts range over the Sierras at about 7000 feet.

The number of Sequoias in the northern groves is reckoned to be as follows: Calaveras, 90 trees upwards of fifteen feet in diameter; Stanislaus or South Calaveras grove, distant six miles from North Calaveras, contains 1380 trees over one foot in diameter (many of them being

over thirty feet in diameter). Mariposa has its 600 Sequoias; and the beautiful Fresno grove, some miles from Mariposa, has 1200. Merced has 50, and Tuolumne 30. The southern belts have not yet been fully explored, but are apparently the most extensive.

The Mariposa grove, where we have been to-day, is the only one which has been reserved by Government as a park for the nation. It lies five miles from here. I should rather say there are two groves. The lower grove lies in a sheltered valley between two mountain-spurs; the upper grove, as its name implies, occupies a higher level, 6500 feet above the sea.

We breakfasted very early, and by 6 A.M. were in the saddle. Capital sure-footed ponies were provided for all who chose to ride. Some of the gentlemen preferred walking. From this house we had to ascend about 2500 feet; but the track follows an easy gradient, and the whole distance lies through beautiful forest, where each successive group of pines seems loftier than the last.

I think we all agreed that the queen of beauty is the sugar-pine,[1] so exquisite is the grace of its tall tapering spire and slender branches, each following the most perfect double curve of the true line of beauty. And next to it, I think, ranks the *incense-cedar*,[2] with its rich brown bark and warm golden-green foliage. The young trees are feathered to the ground, their lower branches drooping, those nearer the summit pointing heavenward, the whole forming a perfectly tapering cone of richest green. The

[1] *Pinus Lambertiana.* [2] *Libocedrus decurrens.*



older trees throw out great angular arms, from which the golden lichens hang in long waving festoons like embodied sunlight.

As we gradually worked uphill through the coniferous belts, the trees seemed gradually to increase in size, so that the eye got accustomed by degrees; and when at length we actually reached the Big-tree grove[1] we scarcely realised that we were in the presence of the race of giants. Only when we occasionally halted at the base of a colossal pillar, somewhere about 80 feet in circumference, and about 250 in height, and compared it with its neighbours, and, above all, with ourselves—poor, insignificant pigmies—could we bring home to our minds a sense of its gigantic proportions.

With all the reverence due to antiquity, we gazed on these Methuselahs of the forest, to whom a few centuries more or less in the record of their long lives are a trifle scarcely worth mentioning. But our admiration was more freely bestowed on the rising generation, the beautiful young trees, only about five or six hundred years of age, and averaging thirty feet in circumference; while still younger trees, the mere children of about a hundred years old, still retain the graceful habits of early youth, and are very elegant in their growth—though, of course, none but mere babies bear the slightest resemblance to the tree as we know it on English lawns.

It really is heartbreaking to see the havoc that has been done by careless fires. Very few of the older trees

[1] *Sequoia gigantea.*

have escaped scathless. Most of this damage has been done by Indians, who burn the scrub to scare the game, and the fire spreads to the trees, and there smoulders unheeded for weeks, till happily some chance extinguishes it. Many lords of the forest have thus been burnt out, and have at last fallen, and lie on the ground partly embedded, forming great tunnels, hollow from end to end, so that in several cases two horsemen can ride abreast inside the tree from (what was once) its base to its summit.

We halted at the base of the Grizzly Giant, which well deserves its name; for it measures ninety-three feet in circumference, and looks so battered and weather-worn that it probably is about the most venerable tree in the forest. It is one of the most picturesque Sequoias I have seen, just because it has broken through all the rules of symmetry, so rigidly observed by its well-conditioned, well-grown brethren; and instead of being a vast cinnamon-coloured column, with small boughs near the summit, it has taken a line of its own, and thrown out several great branches, each about six feet in diameter —in other words, about as large as a fine old English beech-tree!

This poor old tree has had a great hollow burnt in it (I think the Indians must have used it as a kitchen), and our half-dozen ponies and mules were stabled in the hollow—a most picturesque group. It seems strange to see trees thus scorched and charred, with their insides clean burnt out, yet, on looking far, far overhead, to perceive them crowned with fresh blue-green, as if nothing



ailed them, so great is their vitality. Benjamin Taylor says of such a one, "It did not know that it ought to be dead. The tides of life flowed so mightily up that majestic column!"

The Indians say that all other trees grow, but that the Big trees are the special creation of the Great Spirit. So here too, you see, we have, not tree-worship, but something of the reverence accorded to the cedar in all lands. The Hebrew poet sang of "the trees of the Lord, even the cedars of Lebanon, which He hath planted." And the hill-tribes of Northern India build a rudely carved temple beneath each specially magnificent clump of Deodar, to mark that they are "God's trees;' while in the sacred Sanskrit poems they are called Deva dara or Deva daru, meaning the gift, the spouse, the wood of God, but in any case, denoting the sanctity of the tree.

Whether these Californian Indians had any similar title for their Big trees, I have failed to learn; but the name by which they are known to the civilised world is that of Sequoyah, a half-caste Cherokee Indian, who distinguished himself by inventing an alphabet and a written language for his tribe. It was a most ingenious alphabet, consisting of eighty-six characters, each representing a syllable, and was so well adapted to its purpose that it was extensively used by the Indians before the white man had ever heard of it. Afterwards it was adopted by the missionaries, who started a printing-press, with types of this character, and issued a newspaper for the Cherokee tribe, by whom this singular alphabet is still used.

When the learned botanist Endlicher had to find a suitable name for the lovely redwood cedars, he did honour to Sequoyah, by linking his memory for ever with that of the evergreen forests of the Coast Range.[1] And when afterwards these Big trees of the same race were discovered on the Sierras, they of course were included under the same family name.

I began this letter by telling you that these giants fail to impress me with a sense of beauty, from the disproportion of their boughs to their huge stems. This, however, only occurs to me on those rare occasions when a Big tree stands so much alone that the eye can take it in at a glance, and this very rarely is the case. Generally—as Ian Campbell told us—we could not see the trees for the forest! Splendid red and yellow and silvery-grey pillars are grouped all around the colossal Sienna column; and their mingling boughs form a canopy of such lovely green, that at first you scarcely notice that this kindly verdure all belongs to other trees, and that whatever clothing the giant may possess, is all reserved for his (frequently invisible) head and shoulders.

But of the loveliness of the under-world you can form no conception from any comparison with the finest fir-wood of Scotland. Dearly as I love them, they would seem mere pigmies and monotonously dull, as compared with these pine-forests of the West. There is no heather here, however; so Scotland scores hugely on that point! But one special charm here lies in that exquisite lichen,

[1] *Sequoia sempervirens.*



of which I have already told you, which literally covers all the branches of many trees with a thick coating several inches deep of the most brilliant yellow-green. It is just the colour we call lemon-yellow, sprinkled with chrome; but this sounds prosaic, and its effect in the sombre forest is that of joyous sunbeams lighting up the darkness.

We all came back laden with golden boughs, and with immense cones of sugar-pine, which are about fifteen inches in length, and with tiny cones of the giant cedar, which scarcely measure two inches. As the acorn is to the oak, so is this tiny seed-bearer to the great trees; and (as the old fable taught us) well for us that it is so—for to-day I stood beneath a tree which measured 272 feet in height, and rather congratulated myself that nothing larger could drop on my head! In another grove, at Calaveras, there are several trees standing upwards of 300 feet, and one is proved to be 325—a noble spire. I hope to see it before long.

Considering the multitude of cones which must fall every autumn, we rather wondered to see so few young cedars springing up round the parent stems. But this is accounted for by the frequent fires which, as I already told you, have done such havoc in the grove. Comparatively few of the largest trees are altogether free from injury. They are either burned at the base or at one side; or, like the Grizzly Giant, their poor old heart has been burnt out, leaving a blackened cavern in its place, and perhaps forming a chimney right up the middle of the tree. I suppose the Indians have been accustomed to

camp in the grove, for there are fewer traces of fire on the outskirts, and young trees of five or six inches in diameter are tolerably abundant.

Some one took the trouble to count and measure the trees in the upper Mariposa grove, and found that, without counting baby giants, it contains 365 Sequoias of upwards of three feet in circumference—one for every day of the year. Of these about 125 measure upwards of forty feet round. The lower grove contains about half that number. In the upper grove the Big trees are more strikingly grouped, and stand together in clusters, without so many other sorts intervening.

The trail is led uphill by the course of one stream, and down beside another, so as to pass beside all the finest trees. They are bright rushing streams, leaping from rock to rock, and fringed with crystalline glittering icicles. We did not, however, attempt to follow them closely, as at that high level the snow is still so deep as effectually to conceal the trail, so we struck a line for ourselves. Most of our fellow-travellers were quickly satisfied, and turned back from the lower grove with the happy consciousness that they had seen the Big trees, *and could say so*, which appears to be the sole aim and end of a multitude of Globe trotters in regard to most of the beauties of nature.

Our party, of course, determined to push on, and it was agreed that I should take my pony as far as possible, as it was likely to be a tiring scramble. Presently we came to a ridge too steep for the willing beast, so tying him up to a tree, I joined the walkers. The snow was a good deal



more than knee-deep, but the beauty of the scene was a reward for all the fatigue involved, and we were determined not to turn till we had reached a special group, which had been described to us, and which we were to distinguish by finding a small log-hut near a huge fallen tree.

At last we called a halt, and I remained stationary, while the gentlemen went off in three different directions, prospecting. One by one they returned, having failed in their quest, and agreed to give up the search, when I begged for one more trial, and led the way to a long hillock of snow, which proved to be a fallen giant; and just beyond it, on lower ground, lay the group we sought—by far the grandest we had yet seen—and the little log-hut snugly sheltered in the heart of this forest sanctuary, just where a Pahari would have placed his cedar-wood temple. I did feel so proud of having proved a better woodsman than my comrades, all of whom are experienced foresters!

Returning to the ponies, we unpacked our luncheon-basket with much satisfaction, and then leisurely took the homeward track, very wet and tired, but having thoroughly enjoyed the day.

Among its many interests has been the finding of a flower altogether new to me — a strange bright scarlet-crimson blossom, like a very fleshy hyacinth. It is here called the snow-flower,[1] because it rises right out of the earth as soon as ever the snow melts, after the manner of our snowdrop. But instead of being enfolded in smooth green leaves, each crimson bell is wrapped in a crimson

[1] *Sarcodes sanguinea.*

leaflet, which uncurls as it rises above the earth, forming a sort of hyacinthine pyramid of blossom eight inches in height. It has only two or three inches of thick stem, and really suggests little tongues of flame darting out of the newly thawed earth, quite close to snow-drifts. I do not know if it grows in any other country, but I never heard of it elsewhere.

I cannot tell you how glad I am that my lucky star brought me to California (quite against my will) at this season, while there is still just sufficient snow to let me see the Sierra Nevada[1] in its true character. All the mountain-peaks stand out clear and dazzlingly bright against a cold steely-grey sky. This morning it was leaden-hued, and a heavy snow-shower swept over the range,—we trust it was winter's farewell kiss, for certainly we have no wish to be snowed up in the valley, magnificent as it must be, to judge from the description given to me by an adventurous artist, who has braved its dangers in devotion to his art, and deliberately consigned himself to a long captivity in the valley, exquisite in its wintry loveliness, but none the less a prison, with ramparts of frozen snow forty and fifty feet in depth, obliterating every trace of the passes, by which alone the valley is accessible at midsummer, and never melting for six long months.

In some of the canyons the snow accumulates to the depth of a hundred feet, while fifteen to twenty feet sometimes fall steadily all over the mountains, at the rate of

[1] Sierra Nevada—"Range of Snow."



four or five feet in a day. So the few regular inhabitants of the valley make up their minds to total seclusion during this period, and provision themselves accordingly, knowing that till the warm breath of spring shall melt their prison-walls, not even a chance horseman or cat-like Indian will invade their solitude. The wailing of the wild winds and the roar of the rushing rivers are the only murmurs that can reach them from beyond their lonely valley.

Thanks to huge snow-shoes, ten or twelve feet long, turned up in front like the runner of a skate, and with a leather strap in the middle, which is lightly laced over the instep, a good deal of travelling can be done on tolerably level ground; but of course these are utterly useless in traversing difficult mountain-ridges, where the rocky paths are no child's playground at any time, being merely trails winding along almost precipitous crags, or crumbling slopes of disintegrated rock, which at any moment may give way to the constant action of wind and weather and natural drainage, and glide down with headlong crash, to find rest in the valley some thousand feet below.

Of course in the deep snow every familiar landmark is so utterly changed, that the oldest hunter could scarcely guess where, beneath the smooth expanse of beautiful treacherous white, lies the hidden path; and rash indeed must be the man who attempts to force his way in defiance of the Snow-king.

The effect of the shower this morning was truly lovely. The falling flakes shrouded the mountains in a filmy

gauze-like veil, while the distant clumps of dark pines, wrapped in grey shadow, were indistinct and phantom-like. Those nearer to us loomed gigantic, their vast size exaggerated by the magnifying mist and the swirling of the fitful snow-showers. Silently, silently the soft feather-like flakes fell, not a breath of wind stirring to disturb them as they settled on every twig and spray, more lightly than ever butterfly rested on a flower.

Suddenly the clouds cleared off, revealing a heaven more intensely azure than I have ever seen even in the tropics. And then a flood of golden sunlight was outpoured on the beautiful dazzling earth, and the glory of the forest was beyond all description. Each stately pine seemed transformed to a pyramid of glistening alabaster, with strata of malachite, as we caught glimpses of the dark-green undersides of the graceful sweeping boughs, weighed down beneath their burden of myriad snow-flakes.

On every side of us, in the low-lying forest, or the hanging wood that clothed the steep mountain-side, rose ten thousand times ten thousand tall white spires and minarets and pinnacles — as in some idealised oriental city (but assuredly no marble ever gleamed so purely—not even the dreamlike tombs of Agra).

On every grassy reed, each hazel twig and manzanita bush, the light flakes lay in fairy-like crystals—even the silken webs of the busy spiders had caught their share, and now sparkled like jewels in the sunlight. And every great rock-boulder was snow-capped, and each stern rugged crag was softened by a powder-like dusting, lightly



sprinkled wherever a crevice or a furrow gave it a chance of resting; and far above all uprose the eternal hills, robed in spotless white, pure and dazzling.

So, from dawn till sunset, the day has been filled with images of beauty; but not one more pleasant than that of the blazing fire and capital dinner which awaited us on our return here. You must remember that to me fire and snow are alike wellnigh forgotten elements, so they possess almost the charm of novelty, linked with that of old association. Now the most attractive of all good gifts presents itself in the prospect of a grand sound sleep, so—Good night.

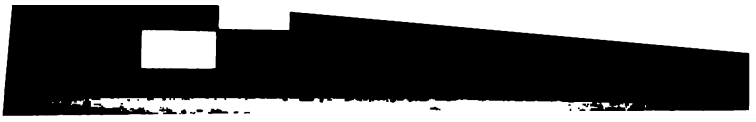
CHAPTER V.

TO THE VALLEY—A WAYSIDE LUNCH—A GRANITE PRISON—GIANT CRAGS—BRIDAL VEIL FALL—LEAFLESS TREES—MAY-DAY—GRANITE ARCHES—MIRROR LAKE—GRANITE DOMES.

IN THE YŌ-SEMITÉ VALLEY, *April* 30.

JUST imagine those people in San Francisco telling us that we could see the Valley (*do* the Valley is the correct expression) in two days, but that three would be ample! Three days of jolting over the roughest roads—three days of hard work rushing from point to point in this wonderland, and then the weary journey to be done over again, shaking all impressions of calm beauty from our exhausted minds!

Well, I for one have wandered far enough over the wide world to know a unique glory when I am blessed by the sight of one, and the first glimpse of this extraordinary combination of granite crags and stupendous waterfalls showed me plainly enough that it would take me weeks to make acquaintance with them, and that if I fail to do so, I shall regret it all my life. So I have written to give up my passage to Honolulu for the present, and have also



written to request that my letters may be forwarded thence to me here. This will make yet one more delay of three weeks in hearing from you; but now that so many months have elapsed without letters, I have got into a way of doing without them (I do not thereby mean to say that you need not write regularly!). But thanks to all the items of home news, and of Fiji news, which I have gathered since landing in San Francisco, I feel fairly *au courant* of what is going on, so the hunger for letters shall not carry me away from the Sierras in three days!

Now, to tell you the news of to-day. We had a drive of about twenty-seven miles from Clarke's Ranch to this place, so we were obliged once more to pack ourselves into the vile van which does duty as a coach. They tell us that later in the season, when the roads have been repaired, they will put on good coaches. I heartily wish they had done so before we came; or still better, that we had arranged to ride to the valley, and send only our unfeeling luggage by coach.

Formerly every one had to ride, and the old bridle-track was led in zigzags along the face of steep hills, by the deep gorge through which the river Merced has cut for itself a way of escape from the valley, between rock-walls which rise precipitously for several hundred feet above its tumultuous waters. For ten miles the said track had to pass through a deep canyon where there was no room at all for a trail, so it was actually blasted from the solid rock, and at some points was led at a height of several hundred feet above the roaring stream, with no protecting

parapet of any sort, but a sheer perpendicular fall, where one false step would assuredly prove the last. Along this dangerous trail, wise, sure-footed horses crept warily, as if knowing that they were responsible for the safety of their riders as well as for their own.

Now safer though less picturesque roads have been engineered, by which the valley can be approached from several different points. That by which we entered is, I think, known as "Inspiration Point." When we started from Clarke's Ranch, we were then at about the same level as we are at this moment—namely, 4000 feet above the sea. The road gradually wound upwards through beautiful forest and by upland valleys, where the snow still lay pure and white; and here and there, where it had melted and exposed patches of dry earth, the red flame-like blossoms of the snow-plant gleamed vividly.

It was slow work toiling up those steep ascents, and it must have taken us much longer than our landlord had expected, for he had despatched us without a morsel of luncheon; and ere we reached the half-way house, where we were to change horses, we were all ravenous. A dozen hungry people, with appetites sharpened by the keen, exhilarating mountain air! No provisions of any sort were to be had; but the compassionate horse-keeper, hearing our pitiful complaints, produced a loaf and a pot of blackberry jelly, and we all sat on a bank and ate our "piece" (as the bairns in Scotland would say) with infinite relish, and drank from a clear stream close by. So were we satisfied with bread here in the wilderness. I confess

to many qualms as to how that good fellow fared himself, as loaves cannot grow abundantly in those parts.

Once more we started on our toilsome way across mountain meadows and forest ridges, till at last we had gained a height of about 7000 feet above the sea. Then suddenly we caught our first sight of the valley lying about 3000 feet below us, an abrupt chasm in the great rolling expanse of billowy granite ridges—or I should rather describe it as a vast sunken pit, with perpendicular walls, and carpeted with a level meadow, through which flows a river gleaming like quicksilver.

Here and there a vertical cloud of spray on the face of the huge crags told where some snow-fed stream from the upper levels had found its way to the brink of the chasm—a perpendicular fall of from 2000 to 3000 feet.

The fall nearest to where we stood, yet at a distance of several miles, was pointed out as the Bridal Veil. It seemed a floating film of finest mist, on which played the loveliest rainbow lights. For the sun was already lowering behind us, and the afternoon shadows were stealing over the valley, though the light shone clear and bright on the cold white granite crags, and on the glittering snow-peaks of the high Sierras.

Each mighty precipice, and rock-needle, and strange granite dome was pointed out to us by name as we halted on the summit of the pass ere commencing the steep descent. The Bridal Veil falls over a granite crag near the entrance of the valley, which, on the opposite side, is guarded by a stupendous square-cut granite mass, project-









ing so far as seemingly to block the way. These form the gateway of this wonderful granite prison. Perhaps the great massive cliff rather suggests the idea of a huge keep wherein the genii of the valley braved the siege of the Ice-giants.

The Indians revere it as the great chief of the valley, but white men only know it as El Capitan. If it must have a new title, I think it should at least rank as a field-marshal in the rock-world, for assuredly no other crag exists that can compare with it. Just try to realise its dimensions: a massive face of smooth cream-coloured granite, half a mile long, half a mile wide, three-fifths of a mile high. Its actual height is 3300 feet—(I think that 5280 feet go to a mile). Think of our beautiful Castle Rock in Edinburgh, with its 434 feet; or Dover Castle, 469 feet; or even Arthur's Seat, 822 feet,—what pigmies they would seem could some wizard transport them to the base of this grand crag, on whose surface not a blade of grass, not a fern or lichen, finds holding ground, or presumes to tinge the bare, clean-cut precipice, which, strange to tell, is clearly visible from the great San Joaquin Valley, a distance of sixty miles!

Imagine a crag just the height of Snowdon, with a lovely snow-stream falling perpendicularly from its summit to its base, and a second and larger fall in the deep gorge where it meets the great rock-wall of the valley. The first is nameless, and will vanish with the snows; but the second never quite dries up, even in summer. It is known to the Indians as Lung-oo-too-koo-ya, which de-

scribes its graceful length; but white men call it "The Virgin's Tears" or "The Ribbon Fall"—a blending of millinery and romance doubtless devised by the same genius who changed the Indian name of Pohono to "The Bridal Veil."

We passed close to the latter as we entered the valley—in fact, forded the stream just below the fall—and agreed that if Pohono be in truth, as the Indian legend tells, the spirit of an evil wind, it surely must be a repentant glorified spirit, for nothing so beautiful could be evil. It is a sight to gladden the angels—a most ethereal fall, light as steam, swaying with every breath.

It falls from an overhanging rock, and often the current produced by its own rushing seems to pass beneath the rock, and so checks the whole column, and carries it upward in a wreath of whitest vapour, blending with the true clouds.

When the rainbow plays on it, it too seems to be wafted up, and floats in a jewelled spray, wherein sapphires and diamonds and opals, topaz and emeralds, all mingle their dazzling tints. At other times it rushes down in a shower of fairy-like rockets in what appears to be a perpendicular column 1000 feet high, and loses itself in a cloud of mist among the tall dark pines which clothe the base of the crag.

A very accurate gentleman has just assured me that it is not literally perpendicular, as, after a leap of 630 feet, it strikes the rock, and then makes a fresh start in a series of almost vertical cascades, which form a dozen streamlets

ere they reach the meadows. He adds that the fall is about fifty feet wide at the summit.

The rock-mass over which it falls forms the other great granite portal of the valley, not quite so imposing as its massive neighbour, but far more shapely. In fact, it bears so strong a resemblance to a Gothic building that it is called the Cathedral Rock. It is a cathedral for the giants, being 2660 feet in height; and two graceful rock-pinnacles attached to the main rock, and known as the Cathedral Spires, are each 500 feet in height.

Beyond these, towers a truly imposing rock-needle, which has been well named "The Sentinel." It is an obelisk 1000 feet in height, rising from the great rock-wall, which forms a pedestal of 2000 more.

As if to balance these three rock-needles on the right-hand side, there are, on the left, three rounded mountains which the Indians call Pompompasus—that is, the Leaping-Frog Rocks. They rise in steps, forming a triple mountain 3830 feet high. Tall frogs these, even for California. Imaginative people say the resemblance is unmistakable, and that all the frogs are poised as if in readiness for a spring, with their heads all turned the same way. For my own part, I have a happy knack of not seeing these accidental likenesses, and especially eschew those faces and pictures (generally grotesque) which some most aggravating people are always discovering among the lines and weather-stains on the solemn crags, and which they insist on pointing out to their unfortunate companions. Our coachman seemed to con-



sider this a necessary part of his office, so I assume there must be some people who like it.

Farther up the valley, two gigantic Domes of white granite are built up on the foundation of the great encompassing wall. One stands on each side of the valley. The North Dome is perfect, like the roof of some vast mosque; but the South, or Half Dome, is an extraordinary freak of nature, very puzzling to geologists, as literally half of a stupendous mass of granite has disappeared, leaving no trace of its existence, save a sheer precipitous rock-face, considerably over 4000 feet in height, from which the corresponding half has evidently broken off, and slipped down into some fearful chasm, which apparently it has been the means of filling up.

Above the Domes, and closing in the upper end of the valley, is a beautiful snowy mountain, called Cloud's Rest, which, seen from afar, is the most attractive point of all, and one which I must certainly visit some day. But meanwhile there are nearer points of infinite interest, the foremost being the waterfall from which the valley takes its name, and which burst suddenly upon our amazed vision when we reached the base of the Sentinel Rock.

IT is so indescribably lovely that I altogether despair of conveying any notion of it in words, so shall not try to do so yet a while.

But from what I have told you, you must perceive that each step in this strange valley affords a study for weeks, whether to an artist, a geologist, or any other lover of beautiful and wonderful scenes; and more than ever, I con-



gratulate myself on having arrived here while all the oaks, alders, willows, and other deciduous trees, are bare and leafless, so that no curtain of dense foliage conceals the countless beauties of the valley. Already I have seen innumerable most beautiful views, scarcely veiled by the filmy network of fine twigs, but which evidently will be altogether concealed a month hence, when these have donned their summer dress. To me these leafless trees rank with fires and snows. I have not seen one since I left England, so I look at them with renewed interest, and delight in the beauty of their anatomy, as you and I have done many a time in the larch woods and the "birken braes" of the Findhorn[1] (where the yellow twigs of the larch, and the grey aspen, and claret-coloured sprays of birch, blend with russet oak and green Scotch firs, and produce a winter colouring wellnigh as varied as that of summer).

Here there is an enchanting reminder of home in the tall poplar-trees—the Balm of Gilead—which are just bursting into leaf, and fill the air with heavenly perfume. They grow in clumps all along the course of the Merced, the beautiful "river of Mercy," which flows through this green level valley so peacefully, as if it was thankful for this quiet interval in the course of its restless life.

There is no snow in the valley, but it still lies thickly on the hills all round. Very soon it will melt, and then the falls will all be in their glory, and the meadows will be flooded and the streams impassable. I am glad we have

[1] The river Findhorn in Morayshire, Scotland.



arrived in time to wander about dry-footed, and to learn the geography of the country in its normal state.

The valley is an almost dead level, about eight miles long, and varies in width from half a mile to two miles. It is like a beautiful park of greenest sward, through which winds the clear, calm river — a capital trout-stream, of about eighty feet in width. In every direction are scattered picturesque groups of magnificent trees, noble old oaks, and pines of 250 feet in height! The river is spanned by two wooden bridges; and three neat hotels are well placed about the middle of the valley, half a mile apart—happily not fine, incongruous buildings, but wooden bungalows, well suited to the requirements of such pilgrims as ourselves.

They are respectively kept by a German (with, I think, a Scotch wife), an Englishman, and an American. The latter, in my opinion, occupies by far the most desirable position, being the farthest up the valley, and consequently the most retired. The wife of its proprietor, Mrs Barnard, was one of our fellow-travellers, and to her care we determined to commend ourselves. But finding that our friends had already secured their quarters at the central hotel, we resolved to spare our poor bones the last straw of jolting; and so we, too, have for the present taken up our abode with our countryman, Mr Black, and find ourselves very well cared for.

When we saw what a splendid view of the Great Yō-semité Falls we get from this house, we thought it must be the best position, and no mistake. But when, this

evening, we wandered up the valley, and perceived that it was quite as beautiful as seen from the other, we confessed that the honours were well divided, and began to understand something of the size of a fall to which a mile east or west matters so little!

May-day, 1877.

May-day! What a vision of langsyne! Of the May-dew we used to gather from off the cowslips by the sweet burnside, in those dear old days

> "When we all were young together,
> And the earth was new to me."

I daresay you forgot all about May-day this morning, in the prosaic details of town life. But here we ran no such risk, for we had determined to watch the Beltane[1] sunrise, reflected in the glassiest of mountain-tarns, known as the Mirror Lake; and as it lies about three miles from here, in one of the upper forks of the valley, we had to be astir betimes.

So, when the stars began to pale in the eastern sky, we were astir, and with the earliest ray of dawn set off like true pilgrims bound to drink of some holy spring on May morning. For the first two miles our path lay across the quiet meadows, which as yet are only lightly sprinkled

[1] Beltane—the old Scotch name for May-day—familiar to every Highlander. It is derived from *Beil-teine*, which means "Baal's fire," and marks the day as the great spring festival of our pagan ancestors. See 'In the Hebrides' (by C. F. Gordon Cumming), p. 215. Chatto & Windus.



with blossom. We found no cowslips, but washed our faces in Californian May-dew, which we brushed from the fresh young grass and ferns. Soon, they tell me, there will be violets, cowslips, and primroses. We passed by the orchard of the first settler in the valley; his peach and cherry trees were laden with pink and white blossom, his strawberry-beds likewise promising an abundant crop.

It was a morning of calm beauty, and the massive grey crags all around the valley lay "like sleeping kings" robed in purple gloom, while the pale-yellow light crept up behind them, the tall dark pines forming a belt of deeper hue round their base.

About two miles above the Great Yō-semité Falls, the valley divides into three branches—canyons, I should say, or, more correctly, cañons. The central one is the main branch, through which the Merced itself descends from the high Sierras, passing through the Little Yō-semité Valley, and thence rushing down deep gorges, and leaping two precipices of 700 and 400 feet (which form the Nevada and the Vernal Falls), and so entering the Great Valley, where for eight miles it finds rest.

The canyon which diverges to the right is that down which rushes the South Fork of the Merced, which bears the musical though modern name of Illillouette. It rises at the base of Mount Starr King, and enters the valley by the graceful falls which bear this pretty name.

By the way, the Starr King has no connection with astronomy and midnight heavens. It was named in memory of a good man, or, as a lady here described him



to me, "a lovely man"—a term which is here applied to moral worth. It was remarked of a hideous but excellent person, "Well, I guess he don't handsome much, but he's kind of lovely!"

The third canyon, branching off to the left, is that whither we were bound. It is called the Tenaya Fork of the Merced, a stream which flows from Mono Lake, past the foot of Cloud's Rest, and dashes down a wild gorge in a series of rushing cascades and rapids. Finally, it calms down as it flows through a quiet green glade (wherein lies a somewhat muddy pool, which is the chosen home of yellow water-lilies).

Having tasted the blessings of peace, the Tenaya takes the first opportunity of expanding and reposing, so it forms a broad pool so still and motionless that it earns the name of Mirror Lake; but soon wearying of repose, it glides off again, and hurries impetuously downhill to join the main stream.

At the point where we left the main valley to turn into the Tenaya Fork, the rock-wall forms a sharp angle, ending in a huge columnar mass of very white granite 2400 feet in height. The Indians call it Hunto, which means one who keeps watch; but the white men call it Washington Column.

Beside it, the rock-wall has taken the form of gigantic arches. The lower rock seems to have weakened and crumbled or split off in huge flakes, while the upper portions remain, overhanging considerably, and forming regularly arched cliffs 2000 feet in height. I cannot

think how it has happened that in so republican a community these mighty rocks should be known as the Royal Arches, unless from some covert belief that they are undermined, and liable to topple over. Their original name is To-coy-œ, which describes the arched hood of an Indian baby's cradle—a famous nursery for giants.

The perpendicular rock-face beneath the arches is a sheer, smooth surface, yet seamed with deep cracks as though it would fall, were it not for the mighty buttresses of solid rock which project for some distance, casting deep shadows across the cliff. As a test of size, I noticed a tiny pine growing from a crevice in the rock-face, and on comparing it with another in a more accessible position, I found that it was really a very large, well-grown tree.

Just at this season, when the snows on the Sierras are beginning to melt, a thousand crystal streams find temporary channels along the high levels till they reach the smooth verge of the crags, and thence leap in white foam, forming temporary falls of exceeding beauty. Three such graceful falls at present overleap the mighty arches, and, in their turn, produce pools and exquisitely clear streams, which thread their devious way through woods and meadows, seeking the river of Mercy.

So the air is musical with the lullaby of hidden waters, and the murmur of the unseen river rippling over its pebbly bed.

Turning to the right, we next ascended Tenaya valley, which is beautifully wooded, chiefly with pine and oak, and strewn with the loveliest mossy boulders. Un-



fortunately, the number of rattlesnakes is rather a drawback to perfect enjoyment here. I have so long been accustomed to our perfect immunity from all manner of noxious creatures in the blessed South Sea Isles, that I find it difficult at first to recall my wonted caution, and to "gang warily." However, to-day we saw no evil creatures —only a multitude of the jolliest little chip-munks, which are small grey squirrels of extreme activity. They are very tame, and dance about the trees close to us, jerking their brush, and giving the funniest little skips, and sometimes fairly chattering to us!

Beyond this wood we found the Mirror Lake. It is a small pool, but exquisitely cradled in the very midst of stern granite giants, which stand all around as sentinels, guarding its placid sleep. Willows, already covered with downy tufts, and now just bursting into slender leaflets, fringe its shores, and tall cedars and pines overshadow its waters, and are therein reflected in the stillness of early dawn, when even the granite crags far overhead also find themselves mirrored in the calm lakelet. But with the dawn comes a whispering breeze; and just as the sun's first gleam kisses the waters, the illusion vanishes, and there remains only a somewhat muddy and troubled pool.

It lies just at the base of that extraordinary Half-Dome of which I told you yesterday—a gigantic crest of granite, which rises above the lake almost precipitously to a height of 4737 feet. Only think of it!—nearly a mile! Of this the upper 2000 is a sheer face of granite crag, absolutely vertical, except that the extreme summit

actually projects somewhat; otherwise it is as clean cut as if the mighty Dome had been cloven with a sword. A few dark streaks near the summit (due, I believe, to a microscopic fungus or lichen) alone relieve the unbroken expanse of glistening, creamy white.

The lower half slopes at a very slight incline, and is likewise a solid mass of granite—not made up of broken fragments, of which there are a wonderfully small proportion anywhere in the valley. So the inference is, that in the tremendous convulsion by which this mighty chasm was created, the great South Dome was split from the base to the summit, and that half of it slid down into the yawning gulf: thus the gently rounded base, between the precipice and the lake, was doubtless originally the summit of the missing half mountain.

I believe that geologists are now satisfied that this strange valley, with its clean-cut, vertical walls, was produced by what is called in geology "a fault,"—namely, that some of the earth's ribs having given way internally, a portion of the outer crust has subsided, leaving an unoccupied space. That such was the case in Yō-semité, is proved by much scientific reasoning. It is shown that the two sides of the valley in no way correspond, so the idea of a mere gigantic fissure cannot be entertained. Besides, as the valley is as wide at the base as at the summit, the vertical walls must have moved apart bodily, —a theory which would involve a movement of the whole chain of the Sierras for a distance of half a mile.

There is no trace of any glacier having passed through

the valley, so that the Ice-giants have had no share in making it. Neither can it have been excavated by the long-continued action of rushing torrents, such as have carved great canyons in many parts of the Sierra Nevada. These never have vertical walls; and besides, the smoothest faces of granite in Yō-semité are turned towards the lower end of the valley, proving at once that they were never produced by forces moving downward.

So it is simply supposed that a strip of the Sierras caved in, and that in time the melting snows and streams formed a great deep lake, which filled up the whole space now occupied by the valley. In the course of ages the *débris* of the hills continually falling into the lake, must have filled up the chasm to a level with the canyon, which is the present outlet from the valley; and as the glaciers on the upper Sierras disappeared, and the water-supply grew less, the lake must have gradually dried up (and that in comparatively recent times), and its bed of white granite sand, mingled with vegetable mould, was transformed into a green meadow, through which the quiet river now glides peacefully.

We watched by the calm Mirror Lake till the sun had climbed so high in the heavens as to overlook a purple crag, and see its own image in the quiet pool. Then we retraced our way down the wooded canyon till we reached the open valley, now bathed in sunlight. Cloud-shadows floated over the dewy grass-slopes and bare summits of the Sierras, and the sunbeams played on the countless nameless waterfalls, which now veil the crags with a rainbow-



tinted, gauze-like film of scattered spray and faint floating mist, swaying with every breath of air.

After breakfast the gentlemen started to explore the upper end of the valley, but I preferred a quiet day's sketching beside the peaceful river.

This evening the sun set in a flood of crimson and gold —such a glorious glow as would have dazzled an eagle. It paled to a soft primrose, then ethereal green. Later, the pearly-grey clouds were rose-flushed by an after-glow more vivid than the sunset itself—a rich full carmine, which quickly faded away to the cold, intense blue of a Californian night. It was inexpressibly lovely.

Then the fitful wind rose in gusts—a melancholy moaning wail, vibrating among rocks, forests, and waters, with a low surging sound—a wild mountain melody.

CHAPTER VI.

THE GREAT YŌ-SEMITÉ FALLS—SEEN FROM BELOW, SIDEWAYS, AND FROM ABOVE—MOUNTAIN-TRAILS—OTHER YŌ-SEMITÉS—THE DOMES—GEORGE ANDERSON.

Saturday, 4th May.

No wonder the Indians reverence the beautiful Yō-semité Falls. Even the white settlers in the valley cannot resist their influence, but speak of them with an admiration that amounts to love. Some of them have spent the winter here, and seem almost to have enjoyed it!

They say that if I could see the falls in their winter robes, all fringed with icicles, I should gain a glimpse of fairyland. At the base of the great fall the fairies build a real ice-palace, something more than a hundred feet high. It is formed by the ever falling, freezing spray; and the bright sun gleams on this glittering palace of crystal, and the falling water, striking upon it, shoots off in showers like myriad opals and diamonds.

Now scarcely an icicle remains, and the falls are in their glory. I had never dreamt of anything so lovely.



As you know, I am not a keen lover of waterfalls in general, and am sometimes inclined to vote them a bore, when enthusiastic people insist on leaving the blessed sunshine to go ever so far down a dank, damp ravine, to see some foolish dribblet.

But here we stand in the glorious sunlight, among pine-trees of a couple of hundred feet in height; and they are pigmies like ourselves in presence of even the lowest step of the stately fall, which leaps and dashes from so vast a height that it loses all semblance of water. It is a splendid bouquet of glistening rockets, which, instead of rushing heavenward, shoot down as if from the blue canopy, which seems to touch the brink nearly 2700 feet above us.

Like myriad falling stars they flash, each keeping its separate course for several hundred feet, till at length it blends with ten thousand more, in the grand avalanche of frothy, fleecy foam, which for ever and for ever falls, boiling and raging like a whirlpool, among the huge black boulders in the deep caldron below, and throwing back clouds of mist and vapour.

The most exquisite moment occurs when you reach some spot where the sun's rays, streaming past you, transform the light vapour into brilliant rainbow-prisms, which gird the fall with vivid iris-bars. As the water-rockets flash through these radiant belts, they seem to carry the colour onwards as they fall; and sometimes it wavers and trembles in the breeze, so that the rainbow knows not where to rest, but forms a moving column of radiant tricolour.









So large a body of water rushing through the air, naturally produces a strong current, which, passing between the face of the rock and the fall, carries the latter well forward, so that it becomes the sport of every breeze that dances through the valley; hence this great column is for ever vibrating from side to side, and often it forms a semicircular curve.

The width of the stream at the summit is about twenty to thirty feet, but at the base of the upper fall it has expanded to a width of fully 300 feet; and, as the wind carries it to one side or the other, it plays over a space of fully 1000 feet in width, of a precipitous rock-face 1600 feet in depth. That is the height of the upper fall.

As seen from below, the Yō-semité, though divided into three distinct falls, is apparently all on one plane. It is only when you reach some point from which you see it sideways, that you realise that the great upper fall lies fully a quarter of a mile farther back than the middle and lower falls, and that it rushes down this space in boiling cascades, till it reaches a perpendicular rock, over which it leaps about 600 feet, and then gives a third and final plunge of about 500, making up a total of little under 2700 feet.

Now, if you can realise that the height of Niagara is 162 feet, you will perceive that if some potent magician could bring it into this valley, it would merely appear to be a low line of falling water, and would be effectually concealed by trees of fully its own height.[1]

[1] Niagara, of course, makes up in width what she lacks in height. The



As yet, I have not attempted to reach the upper falls, but have had most enchanting scrambles through the pine-woods, and up a steep canyon, over piled-up fragments of rock, to the base of the lowest fall, or rather to a sheltered nook just to one side of it—a little oasis of green grass and ferns, whence I could get a view of the fall *en profil*, and watch it rushing past, forming a most beautiful and unusual foreground to the green valley seen far below, and the great granite mountains beyond.

As seen from this point, this fall is magnificent—complete in itself. Yet from a little distance it appears only an insignificant appendage to the great fall—and its base is altogether hidden by the trees. (It struck me as a nature-parable of human rank—the magnates of the county finding their level in the great world, their social size dwarfed in the presence of taller giants!) I sat for hours watching these falling waters, and attempting to sketch the unsketchable, till I was fairly bewildered by the deep-toned voice of many waters, and the rushing spray, and was glad to return to the quiet green meadows.

height of the Horse-shoe or Canadian Fall is about 150 feet; its width is 2100 feet. The American Fall is about 160 feet in height, and 1100 in width. The total width, inclusive of Goat Island, is 4200 feet.

Niagara not only owes nothing to its accessories, but actually benefits by the total absence of any scenery. There is absolutely nothing in the very uninteresting level country around it, to distract the attention from the marvellous beauty of the majestic falls—from the indescribable loveliness of that heavy waving curtain of emerald-green water, and the ethereal clouds of misty foam, on which the rainbows never cease to play, whether in sunshine or moonlight.

Niagara is the type of force and irresistible might. Yō-semité is the emblem of purity and elegance.



The snows on the Sierras are melting rapidly, and the streams are already overflowing their accustomed channels. Several pleasant paths which we explored the day after our arrival are now flooded; for the Yō-semité is in spate—a boisterous, whirling cataract, thundering and chafing among the boulders. Its waters have now divided into a dozen branches, each a foaming torrent, which wears a channel for itself as it rushes headlong through the pine-woods, seeking the placid Merced river, which glides on a dead level from the moment it enters the valley till it departs thence.

Tuesday, 7th.

I cannot sufficiently congratulate myself on having brought my excellent English side-saddle. Those provided by the horsekeepers of the valley are horribly uncomfortable. They object exceedingly to mine, as being a good deal heavier, but the difference of fatigue on a long day's expedition is not to be told; so I resolutely refuse to use any but my own. Some ladies, I believe, adopt a neat sort of bloomer dress, and ride men's saddles—a practice highly recommended by the guides, who call it "riding straddle-legs." They say it is infinitely safer on these dangerous precipitous trails, as it ensures a good balance. I believe they are right, but nevertheless, have no intention of taking their advice![1]

[1] In olden days it seems to have been optional for the ladies of Britain either to ride astride or sideways. Chaucer describes the Wife of Bath as wearing on her feet *a pair* of spurs, sharp. In the 'Domestic Manners of the Middle Ages,' illustrations taken from very old drawings show ladies



There are no end of animals for hire, chiefly sturdy ponies and mules, very sure-footed, as they would need to be. The charge for pony-hire is exorbitant. I am paying five dollars a-day (£1) for the use of a very commonplace beast. The owners justify the charge, on the plea of the expense of keeping horses in the valley during the winter, when they require hay and barley imported from the plains at very heavy freight.[1]

To any but a first-rate walker, a beast of some sort is a downright necessity here, if you wish to see anything beyond the valley itself, as it holds you fairly imprisoned till you can scale its walls. Not till then do you gain any idea of the vast expanse of alpine scenery which lies beyond—range beyond range,—a world of grey granite and snow, relieved by tracts of dark pine-forest.

When we first arrived, we really felt as if we never could escape from the valley, there seemed no possible means for any but winged creatures to reach the upper world; but soon we learnt that patient men had devised cunningly contrived zigzag trails, taking advantage of every little ledge and crevice, of rock-blasting here and building there, till they had engineered excellent paths at a safe gradient along the face of what appear to be perpendicular

riding, sometimes sideways, sometimes *à califourchon;* and it is stated that the former manner was considered the more courtly, but that in the chase it was deemed safer to ride astride.

[1] Later in the season the guardians of the valley issued a fixed tariff, which reduced horse-hires to, I think, three dollars a-day for moderate distances, and five dollars only for what are called double rides. But as the owners refuse to let any beast go out unless accompanied by a mountain guide, the traffic in horse-flesh continues remunerative.

walls of granite; and so, winding to and fro, here following the course of some deep gulch, there taking advantage of a patch of forest, they finally reached the summit, and could look down on the valley as on a green and silver ribbon, lying far below them.

Though the valley is reserved by the State as a national park, all these trails have been made by private enterprise, at a considerable outlay of labour, time, and money. So the proprietor of each is allowed to levy a toll of from one to two dollars on each passenger. Having paid once, you are free for the season; but few indeed are the travellers who ever allow themselves time to go over any of these grand scenes more than once, and then at railroad speed.

I am determined to be one of those few, and allow myself time to know the valley. One great inducement to remain is the prospect of the azaleas. The first morning we started to explore, we passed through thickets of leafless shrubs, which instantly caught my attention, as being assuredly the fragrant pale-yellow azalea of our shrubberies. My companions thought it was impossible; but, on inquiry, we learn that it is so, and that a month hence the whole air will be perfumed by them. That of itself would be worth waiting for; for though I have wandered through groves of scarlet tree-rhododendrons in the Himalayas and in Ceylon, I have never yet been in a land of wild azalea, and there are few flowers I love so well.

I have not seen any indication of rhododendrons in this part of California, but I am told that in the north-west, in Humboldt county and its surroundings, there are great



districts gorgeous with these gay shrubs where the hill-sides are clothed with a dense mass of rich colour, but of course lack the enchanting fragrance of the azalea-thickets, which extend far to the southward.

Our chief expedition hitherto has been to the summit of the Great Yo-semité Fall. The only practicable route by which to reach the foot of the upper fall is a very circuitous one, retracing the valley till you ascend zigzaging through a belt of beautiful pines, and so gradually gain the high level. The views at every turn were magnificent; each fresh aspect of the wonderful falls helped us more and more to realise their might and majesty. Can you picture them ever so faintly?—the flashing, foaming cataract, tumbling almost perpendicularly for half a mile from the brink to the base; first the wild leap of 1500 feet, dashing headlong into the cup worn by its own action in the hard granite rock, then chafing madly among the fallen boulders ere it rushes to the second ledge, ready to repeat the leap.

You look up at the never-ceasing shower of water-rockets, till your eyes are dazzled with their gleaming white, and rest thankfully on the pure blue heaven from which they seem to fall; and the floating spray makes mist among the dark pines, till a gleam of sunlight transforms it to a glittering shower of shattered diamonds.

When we reached the base of the upper fall we dismounted, and scrambling over masses of rock, piled in chaos as they fell from the upper crags, we reached a great boulder, just beyond reach of the spray, and there sat gaz-



ing up at the living waters, ever falling, falling, in thousands of separate tongues of foam. Some say it is like a waving plume of snowy feathers, but to me the form of inverted fire-rockets is the only one really descriptive. Sometimes each rushes singly, preserving its perfect form, while others are dispersed in mid-career by the rushing breeze.

In presence of that rocket-shower, falling from a height of 1600 feet, what dainty miniatures our favourite British waterfalls do seem! I suppose lovely Foyers is our finest fall in Scotland; but when reduced to figures, its height is only 212 feet. The falls of Bruar are 200 feet. The falls of the Rhine, 100 feet. And even the far-famed Staubbach only attains 900 feet.

You do not realise the full majesty of this most worshipful monarch of the water-gods till you have crept meekly to his feet, as we did, and there remain spellbound, overawed by the glory of the scene, the sense of the irresistible power of that headlong rush of bright gleaming waters. The utter restlessness of their ceaseless motion, and their thunderous roar as they strike the rocky basin far below, soon become overpowering—eyes and brain are alike bewildered; and besides the direct downward movement, spirit-like clouds of spray float around, drifting with every current of wind, softening the too dazzling brightness of the white foam, but adding to the giddy, complex motion of the whole.

The face of the great crag overhangs a little, so that, as the waters are thrown forward, they leave a dry space



behind the fall at the base of the cliff—a long broad passage, where those who are so inclined can enter, and standing behind the curtain of falling waters, can listen to the rushing wind, and try how near danger they can venture without accident. When only a light summer stream is falling, and the sun shining on it, the effect produced is that of a shimmering shower of diamonds. Now, however, when the snow-flood is so heavy, a visit to this strange spot would be risky, and the approach to it would involve a drenching from the heavy spray, so we were nowise tempted; but tearing ourselves away from this beautiful and most fascinating spot, we commenced the steep ascent through Comimi Canyon.

The trail is led up by such innumerable zigzags, that a tolerably easy grade has been attained, and my sturdy and heavily weighted pony climbed up without the slightest hesitation. What with excavations in some places, and building up rock foundation in others, the tracing and making of such a trail, and then the constant repairs consequent on falling rocks or melting snows, imply both genius and ceaseless care.

The canyon heads actually at the summit of the falls, and there seems no sort of reason why the Yō-semité Creek should not have rushed down the slope, instead of selecting the headlong course which it has adopted—for which, however, we are all most deeply grateful to it.

By its ceaseless friction, it has so polished the granite rock over which it falls, that to attempt a near approach is just like walking on ice. It is horribly dangerous, as

the first slip would inevitably prove the last. Yet the fascination is irresistible, so I crawled to the brink on hands and knees, and there lay watching the curve of the glittering waters as they rushed past me on their headlong leap, down, down, down, till the abyss of white foam was merged in the ever-swaying, ever-varying cloud of spray, while a thousand mingling echoes rose from the rocky world below. It was awesome beyond all words. Far, far beneath us, faintly seen through the floating mists, the valley lay bathed in sunlight, like a dream of some other world.

The Yō-semité Creek is a snow-fed stream which rises on the west side of the alpine group, of which Mount Hoffmann is chief, lying about ten miles north-east of the valley. Its course lies over a bed of bare granite rock; and as it is fed exclusively by the melting snow, it follows that, as the season advances, it must shrink to a most insignificant rivulet.

At this high level the snow is still lying deep in the unsunned gorges. Yesterday there was a "flurry," followed by a night of frost, and a light powdering of glittering snow-crystals still sparkles in the bright sunlight, marking the intricate tracery of the leafless boughs. Every grassy reed is snow-tipped, and snow-feathers lie softly on the drooping brambles and the rich brown tufts of lichen.

We were anxious to reach a high point known as Eagle's Peak (4000 feet above the valley), which commands a magnificent view of the Sierras on every side. But as we ascended, the snow became deeper and deeper; so, as the



ride was neither safe nor pleasant, we agreed to defer it till the season was further advanced.

As it was, we saw several fine snow-peaks in the distance, and gained a better idea of the relative size of the giant crags around us, especially of the stupendous granite Domes. This bird's-eye view also enabled us to realise the true geological aspect of the valley itself,—as a huge sunken pit—no chasm, but the blank left by a portion of the earth's surface having actually subsided.

I am told that several valleys have been discovered in these Sierras somewhat similar to this, so that the Yō-semité is only unique in point of size.

Indeed, such geological *faults* as have formed this very singular depression exist in many countries. We saw two notable examples in the Blue Mountains of Australia, where two gigantic pits occur, known as Govat's Leap and the Weatherboard, at each of which we stood on the brink of a deep gorge enclosed by vertical cliffs as steep as these, and looked down on the crowns of giant ferns and trees, lying apparently 2000 feet below us, a sanctuary untrodden by human foot. But those cliffs of reddish sandstone do not give you the same feeling of solidity and strength as these granite crags, which fill you with ever-increasing wonder the longer you look upon them.

Mr. John Muir describes several lovely valleys of the Yō-semité type farther to the south, in the heart of that "rugged wilderness of peaks and canyons, where the foaming tributaries of the San Joaquin and King's rivers take their rise." He found the most beautiful of them all

near the source of the former—a canyon two miles long and half a mile broad, hemmed in by perpendicular granite crags, and the crystal river flowing through peaceful groves and meadows, haunted by deer and grouse and joyous singing-birds.

Thence he passed into a wilder, narrower gorge, with walls rising perpendicularly from 2000 to 4000 feet above the roaring river. "At the head of the valley the main canyon forks, *as is found to be the case in all Yō-semités.*"

Mr Muir, however, attributes the formation of that valley to the action of two vast ice-rivers in the glacial period. But now the free, beautiful San Joaquin river, new-born from its glacial fountain, enters the valley in a glorious cascade, its glad waters overleaping granite crags 2000 feet in height.

Truly these Californian Alps hold treasures of delight for lovers of all beautiful nature who, on their parts, can bring strength and energy for mountaineering—a sure foot, a steady head, and any amount of endurance.

With respect to the marvellous rounded Domes, I am told that there are dome-shaped masses in all regions where granite prevails, but that they are found in the Sierra Nevada on a grander scale than elsewhere. The only thing altogether unique is the Split Dome. The North Dome on the opposite side of the valley has many near relations. They are built up of thick layers of granite—huge concentric plates overlapping one another in some places, so as to render them inaccessible. Some of these granite flakes are about twenty feet thick, others



only three or four feet, and they are curved much in the same way as the basaltic pillars in some of the caves in the Isle of Skye[1] and on the Irish coast; but there is nothing columnar in their appearance, which is rather suggestive of armour-plating, and reminds me of the scales of the armadillo.

I am told that this peculiar formation is due to the combined work of fire and frost, and that the granite layers were curved by the vast weight of ice as the glaciers passed over them. Some one else tells me that the granite took these curves during the process of cooling, and that the glaciers merely polished the outer surface as they passed over the mountains, grinding and furrowing them with deep seams, caused by the gravel and rocks they carried with them—a remarkably coarse form of sand-paper, applied with a very heavy hand! I believe the latter is the most generally accepted theory.

The North Dome is lower by 1000 feet than its *vis-à-vis*. Its actual height above the valley is 3725 feet. It is built up on the summit of "The Royal Arches," and the whole is quite suggestive of the great marble archway and silvery-grey cupola of some vast Eastern shrine. On the side facing the valley, the great flakes so overhang one another, that this mountain, though apparently forming an easy curve, is practically inaccessible from that direction; but on the north side it slopes away easily in a long ridge, easy of ascent.

But the Split Dome is a very different matter. While

[1] See illustration, 'In the Hebrides' (C. F. Gordon Cumming), p. 380.



the side facing the valley is, as I have told you, absolutely vertical, showing where the massive mountain of rock was cleft in twain, the remaining half presents a rounded summit, sloping downward at a very steep incline, which becomes steeper and steeper as it descends, till at the base it becomes quite precipitous.

For many years it was considered altogether inaccessible; but about eighteen months ago it was scaled by an energetic, determined Scotchman, George Anderson by name. He hails from Montrose, but has taken up his abode in this beautiful valley; and now he looks on the Half-Dome with such mingled pride and veneration, that I should think he will never leave it.

It was in 1875 that he determined to reach the summit, if mortal man could accomplish the feat. Climbing goat-like along dizzy ledges, and clinging like a fly to every crevice that could afford him foothold, he reached the point where hitherto the boldest cragsman had been foiled. Here he halted till he had drilled a hole in the rock and securely fixed an iron stanchion with an eye-bolt, through which he passed a strong rope. Then resting on this frail support, he was able to reach farther, and to drill a second hole and fix another eye-bolt. From this point of vantage he could secure a third, carrying the rope through every bolt, and always securing it at the upper end.

Thus step by step he crept upward, till at last he had drilled holes and driven in iron stanchions right up the vast granite slab, securing 1100 feet of rope. Then rounding the mighty shoulder, he stood triumphant on the sum-



mit, and there to his amazement he found a level space of about seven acres, where not only grasses have spread a green carpet, but seven gnarled and stunted old pines, of three different kinds, have contrived to take root, and, defying storms and tempests, maintain their existence on this bleak bare summit.

Having thus made the ascent a possibility, Anderson's delight now is to induce enterprising climbers to draw themselves up by his rope ferry, the manner of proceeding being to keep one foot on either side of the rope, and, retaining a good grip of the rope itself, gradually to haul one's self up to the summit, there remain for a while lost in wonder at the grand bird's-eye view, and then climb down backwards.

It is all right so long as most of the stanchions stand firm and the rope does not break; but should this simple accident occur, there would not be the faintest possibility of rescue,—indeed it would be no easy task to recover the battered and mutilated remains of any poor wretch who might fall from that majestic dome. A leap from the summit of St Paul's would be child's-play in comparison. A man troubled with suicidal mania would find it hard to look down from a precipice a sheer fall of 5000 feet, and resist the temptation to cast himself down.

I give you the altitude of all these grand crags and mountains, because I know no better way of conveying to you some standard of their glory; and yet, how utterly useless figures really are to enable any one to realise such

subjects!. A quaint American writer[1] remarks, that "it is much as if, when the three angels made a call at Abraham's tent on the plains of Mamre, the patriarch had whipped out a two-foot rule, and measured and written down the length of their wings!!"

The same writer makes short work of all learned theories concerning this grand valley. He says: "As for the three great geological theories of this cleft's formation,—1st, that the bottom fell out and let things down; 2d, that earthquakes and volcanic fires melted the crags and rent them asunder; 3d, that the softer and more edible parts of rock and mountain were eaten out by rains and frosts and rivers, leaving the stupendous bones bleaching through the centuries,—you would not toss coppers for the choice of them. All you know is, that you are in a tremendous rock-jawed yawn of the globe; and the most you hope is, that it will keep on yawning till you are safely out of its mouth!"

In describing the South Dome, he compares it to a sugar-loaf-shaped human head: "Its organ of veneration is tremendous; there are six or eight acres of it, 6000 feet high, and solid rock through and through!"

[1] Benjamin F. Taylor.



CHAPTER VII.

A COTTAGE HOTEL—THE VILLAGE—YOUNG STUDENTS—THE CASCADES—DIGGER INDIAN CAMP—PRIMITIVE MAN—ACORN-FLOUR—EDIBLE PINES—INDIAN AGENCIES—THE MODOC WAR.

BARNARD'S HOTEL, *8th May.*

OUR naval friend and the Cashmerian sportsman having been obliged to return to the low country, we have carried out our original intention, and forsaking the Union-Jack for the Stars and Stripes, have established ourselves at this pleasant little wooden bungalow, about a mile farther up the valley, and on the river—a beautiful situation. This was the site of the old original house, built by Mr Hutchings—one of the first white men who set foot in the valley, and who published accounts of it and opened it up to the world. Entranced with its beauty, he brought a lovely young wife to settle here, and his were the first white children born in the valley.[1]

[1] Strange to tell, when in after-years Florence, the first-born—a bright, joyous girl—returned to the valley on a visit to her friend Effie Barnard in the autumn of 1881, the Angel of Death took both these happy young



All arrangements here are of the simplest—quite comfortable, but nothing fine. The main bungalow, which is surrounded by a wide verandah, has on the ground-floor a minute post-office, booking-office, and bar; a large dining-room, with a row of windows on each side, occupies almost the entire space, and opens at the farther end into a clean tidy kitchen, where a Chinese cook attends to our comfort.

An outside staircase leads to another wide verandah running round the upper storey, which consists entirely of bedrooms. A separate wooden house stands just beyond it—also two-storeyed—and all divided into minute sleeping-rooms. I have chosen one of these, as it commands a splendid view of the falls; and from the earliest dawn I can watch their dream-like loveliness in every changing effect of light—sunshine and storm alike minister to their beauty.

It must be confessed that the rooms are rough-and-ready; and the partitions apparently consist of sheets of brown paper, so that every word spoken in one room is heard in all the others! I am so well accustomed to this peculiarity from long residence in the tropics (where ventilation is secured by only running partitions to within a foot of the ceiling), that it does not trouble me much, but must be somewhat startling to the unaccustomed ear

lives within a few days of one another—the first-fruits gathered by the Great Reaper in this secluded harvest-field. So the two girls lie side by side beneath the old oaks in the valley, so dear to both; and the sighing winds, and the murmuring waterfalls, and the twilight calls of the turtle-doves, sing their requiems for evermore.

which finds itself unwillingly compelled to share the varied conversation of the inmates of neighbouring stalls! I confess that last night I was forcibly reminded of the story of the man who snored so loud that he couldn't get to sleep, so had to rise and go into another room that he mightn't hear himself!

On the opposite side of the road is the Big Tree Room, which is the public sitting-room, and takes its name from a quaint conceit—namely, that rather than fell a fine large cedar which stood in the way of the house, Mr Hutchings built so as to enclose it, and its great red stem now occupies a large corner of the room! Of course it is considered a very great curiosity, and all new-comers examine it with as much interest and care as if it were something quite different from all its brethren in the outer air! It certainly is rather an odd inmate for a house, though not, as its name might suggest, a *Sequoia gigantea*.

It stands near the great open fireplace, where, in the still somewhat chilly evenings, we gather round a cheery fire of pitch-pine logs, which crackle and fizz and splutter, as the resinous pine-knots blaze up, throwing off showers of merry red sparks. It is a real old-fashioned fireplace, with stout andirons such as we see in old English halls. Round such a log-fire, and in such surroundings, all stiffness seems to melt away; and the various wanderers who have spent the day exploring scenes of beauty and wonder, grow quite sympathetic as they exchange notes of the marvels they have beheld.

Beyond the Big Tree Room, half hidden among huge



mossy boulders and tall pines, stands a charming little cottage, which is generally assigned to any family or party likely to remain some time.

At a little distance, nestling among rocks or overshadowed by big oaks, lies a small village of little shanties and stores (*alias* shops),—a store where you can buy dry goods and clothing on a moderate scale—a blacksmith's forge—a shop where a neat-handed German sells beautifully finished specimens of Californian woodwork of his own manufacture, and walking-sticks made of the rich claret-coloured manganita. Then there are cottages for the guides and horsekeepers, and an office for Wells Fargo's invaluable Express Company, which delivers parcels all over America (I believe I may say all over the world). There is even a telegraph office, which, I confess, I view with small affection. It seems so incongruous to have messages from the bustling outer world flashed into the heart of the great solemn Sierras.

As a matter of course, this glorious scenery attracts sundry photographers. The great Mr Watkins, whose beautiful work first proved to the world that no word-painting could approach the reality of its loveliness, is here with a large photographic waggon. But a minor star has set up a tiny studio, where he offers to immortalise all visitors by posing them as the foreground of the Great Falls!

And last, but certainly not least, are Mr Haye's baths for ladies and for gentlemen, got up regardless of expense, in the most luxurious style. The attractions of the baths

are greatly enhanced by the excellence of the iced drinks compounded at the bar of such a bright, pleasant-looking billiard-room, that I do not much wonder that the tired men (who, in the dining-room, appear in the light of strict teetotallers, as seems to be the custom at Californian *tables d'hôte*) do find strength left for evening billiards! with a running accompaniment of "brandy-cocktails," "gin-slings," "barber's poles," "eye-openers," "mint-julep," "Sampson with the hair on," "corpse-revivers," "rattlesnakes," and other potent combinations.

Mr Haye's special joy and pride is in a certain Grand Register, in which all visitors to the valley are expected to inscribe their names. It is a huge, ponderous book, about a foot thick, morocco-bound, and mounted and clasped with silver. It is *said* to have cost 800 dollars. It is divided into portions for every State in the Union, and for every country in the world beyond; so that each man, woman, and child may sign in his own locality, and so record the fact of his visit, for the enlightenment of his own countrymen.

The entries include names from every corner of the earth. Already the stream of visitors is setting in, and a few days hence all the hotels expect to be well filled for their short season of about three months, during which many Californians take their annual holiday. After that, though the autumn is glorious, only a few real travellers find their way here.

Considering that people in these parts must be pretty well accustomed to every variety of nation and of raiment,



I am much amused by the amount of attention bestowed on Mr David's apparel, which is simply that of the ordinary British sportsman—a sensible tweed suit. The day we left San Francisco, we were "riding in a tram-car," when a man got in, and straightway his eyes were riveted, first by the stout-ribbed woollen stockings, woven by a fine "canty" old wife in the north of Scotland, and then by the strong British shooting-boots, with their goodly array of large nails. Not a word did he utter till he was in the act of leaving the car, when he could refrain no longer, but slowly and emphatically remarked, "Well, sir, I guess I'd rather not get a kick from *your* boots!"

This morning a small boy, seeing me sketching near the school, came up to inspect us. After a leisurely survey of Mr David's garb, he solemnly—apparently not with cheeky intention—remarked, "I say, mister, are not your pants rather short?" Evidently knickerbockers were a new revelation to his youthful mind—accustomed only to see full-length trousers stuffed into high jack-boots.

The small boy was laden with school-books, one of which was a very large volume of American history. As each State already furnishes a separate section as large as an average school-history of any country in Europe, it follows that the complete work must be the size of an encyclopedia; and I felt considerable pity for the unlucky rising generation who have so large a dish to digest. However, they are apparently not much troubled by the ancient or modern history of other countries.

Our little friend, having been joined by several sisters

(clustered on a tall horse, and all laden with school-books), the family party volunteered to favour us with some choral hymns. If not strictly musical, the effort was kindly and characteristic. This done, all climbed on to the tall horse, and, crossing the river at the ford, went on their way rejoicing.

Among the early arrivals in the valley are two very pleasant Englishmen, who have just been doing a very interesting riding tour in Mexico. They prove to be "friend's friends;" and to-day we joined forces on an expedition for some miles down the beautiful river (which flows so calmly and peacefully through these quiet meadows), to the spot where it begins a rapid descent, chafing and wrestling with great boulders, rushing headlong on its downward way, raging and roaring—a tumultuous chaos of foaming waters. These rapids extend for a considerable distance, passing by beautiful groups of old pines and other noble timber, and, in fact, are the feature of the expedition.

But our actual destination was a lovely little fall known as "The Cascade," where a minor stream comes leaping over the cliffs in a succession of broken falls, flashing in and out among the beautifully wooded crags, till, with one joyous bound, it lands in a small secluded meadow, across which it glides in a clear sparkling stream.

Here we unpacked the luncheon-basket, which had been slung on to one of the ponies, and, with the flower-sprinkled turf for a table-cloth, and a cloudless blue heaven overhead, we concluded that our mutton sand-









wiches were a royal feast. I think no one could help enjoying life in such beautiful surroundings, and in this clear, crisp, sunny atmosphere. Every one wakes in the morning feeling up to anything, and day after day the fine weather continues, and will do so (say the old inhabitants) for months to come! What a delightful climate!

Thursday, 9th.

I have been all day sketching a most picturesque, but unspeakably filthy, Indian camp, of conical bark-huts. It is pitched about a mile from here, on a lovely quiet reach of the river, sheltered by grand old trees, and with the mighty Domes towering overhead. If beautiful clean Nature could preach her own lessons, she might surely do so here; but a dirtier and more degraded-looking race than these wretched Digger Indians I have rarely seen—nowhere, in fact, except in Australia, whose aboriginal blacks are, I think, entitled to the very lowest place.

These Digger Indians are a small race; their tallest men do not seem up to the standard of average whites. All have a thick mop of the most unkempt, long, lanky black hair. The men sometimes wear long braids; the squaws cut theirs across the forehead, in a fashionable fringe. They have square, flat faces, with mouths opening from ear to ear like night-jars. Some of the men embellish their faces with streaks of vermilion; but where, oh where! are the ideal war-paint and feathers? Most of them wear dirty tattered old woollen clothes,

probably cast off by campers, and eked out with a certain amount of peltry, filthy beyond description. Some, however, are dressed in suits of half-tanned leather, embroidered with beads, and a few dandies have Spanish-looking felt hats, and bright-coloured handkerchiefs thrown over their shoulders. These are the wealthier members of the community, and ride about on small ponies, the squaws riding "straddle-legs" (*i.e.*, astride). Rope-halters fastened round the lower jaw act as efficient bridles.

Some of my friends had the good fortune to witness a Digger Indian festival, when about a hundred of these strange beings assembled for a solemn dance. They formed in a large ring, and moved slowly round and round, with a jiggy springing step. There did not seem to be any characteristic feature in the dance, and certainly no grace. The dancers, however, seemed thoroughly to enjoy themselves, and it appears that this is a favourite evening amusement. One solitary mortal may begin jigging all by himself, to the music of his own howls, and straightway others catch the infection, and set to dancing each by himself, and so continue for hours.

I am told that some of the tribes periodically hold great religious "medicine dances," which are danced by chosen warriors, for the good of the whole tribe, and kept up for three days and nights without one moment's intermission for any purpose whatever, and not a morsel of food, nor one drop of water, is allowed to pass the lips of the men selected for this ordeal. It is a feat of endurance which is never required of any warrior more than once

in his life, and few are able to endure to the end of the dance. Some, indeed, endure to the death; but for a dancer to die is esteemed terribly "bad medicine," an augury of disaster for the tribe. It is, however, quite common for men to fall fainting from exhaustion, and be carried out of the medicine-lodge insensible.

The word "medicine," as here used, has reference to divination, by which all details of daily life are regulated. The movements of a rattlesnake, the flight of a bird, the cry of a wild beast, are interpreted as heralding good or bad luck, and are recognised as good or bad medicine. No Indian will start on a journey or a hunting expedition, without first "making medicine." He takes certain bones of divers reptiles, birds, or animals, the ashes of some lucky plants, and portions of coloured sand or earth; these and many other unknown ingredients are stirred together in a flat vessel, and from the manner in which they blend, the Indians read woe or success in the enterprise. If the former, he carries the bad medicine outside the camp and buries it, lest any one should touch it. If it is good, he makes up little packets of it in pouches of dressed deer-skin—precious amulets—to be worn by men, women, and children. When all the pouches have been filled, what remains of the mixture is burned on the domestic hearth.

As yet I have not found any of these Digger Indians who can speak a word of English.

They carry their babies slung over their shoulders, in wicker cradles, the whole weight being supported by a strap passed across the maternal forehead. What head-

aches this suggests! The cradles consist only of a flat back of basket-work, with a flap down each side, and a projecting hood shaped like that of a perambulator, to shield the head of the little papoose from the sun, and also to protect it from possible tumbles. The fat little reddish-brown baby is laid naked on its basket, with a soft covering of easily changed moss spread as mattress and blanket: perhaps a small shawl is laid over the moss. The baby's arms are tucked down by its sides, and the flaps are tied or laced across the front. Sometimes the arms are allowed to hang loose, but this is exceptional.

The creatures look just like mummies (the outer mummy-case!), and gaze forth at the world with dark eyes, as solemn and unresponsive as if they already realised their heritage of woe. Their long black hair and flat faces add to their unbabyish appearance, and altogether they are queer little mortals.

When the mothers are busy, the papoose in its cradle is suspended, like some odd parcel, from the branch of a tree, beside the drying bear-skins. There it hangs safe out of harm's way—especially out of reach of the inquisitive dogs, who are always prowling silently about. One of these sneaked up to me to-day, and on my rashly giving it a biscuit, it made a dash at my packet of sandwiches, and scampered off rejoicing, with this dainty bite.

The wigwams are of the very rudest description, consisting only of long strips of thick pine-bark, piled up like a pyramid, and with flaps of deer-skin to curtain the door at night, and various old skins pegged down over the bark

to keep out the wind. Of rain at this season there is little fear. A fire is kindled in the middle of this bark-tent, and the blue smoke escapes by a hole at the top, contrasting charmingly with the rich sienna and brown tones of the bark.

The filth of the surroundings is such that I have never ventured to peep inside one of these picturesque but most uninviting homes, though we have visited several little encampments, and have watched hideous old crones weaving the most beautiful baskets, and smoking like chimneys —the ideal of bliss! The poetic Indian calumet of old stories is unfortunately replaced by the invariable clay pipe—dear alike to men and women!

To-day, while I was sketching the camp, several of the men had thrown their scarlet Government blankets round them, and I blessed them for the bit of colour. They were gambling with exceedingly dirty old cards, which seems to be their only occupation when not engaged in foraging.

They are very successful fishers, and generally camp near some clear trout-stream. The hotels secure a ready market for all they bring, and these Merced trout are certainly most delicious. As these are almost their only marketable property, I fear they cannot often enjoy them themselves—indeed they consider all fish insipid, and only eat it when they have nothing else. Their fishing-tackle does not involve much outlay. A light hazel-rod cut from the bank, a casting-line, and a few green grasshoppers or worms as bait, are all they need to beguile the bonnie



trout. The worms are occasionally carried in their mouths as the simplest and safest method of conveyance!

They are too abjectly poor to be dainty feeders, and, as their name implies, they live partly by digging up edible wild roots, with an occasional broiled snake, frog, or lizard, or a handful of roast grasshoppers as a relish; sometimes they are reduced to eating carrion-birds, but are said to have a prejudice against magpies and wild turkeys, the latter from a belief that eating their flesh will make them cowardly.

Now and then they organise hunting expeditions, and go off in search of bears or deer; and great is the joy of women and children when they chance to be, if not in at the death, at least sufficiently near to claim their share at the "gralloching" (as we say in the Highlands), which here becomes a loathsome festival, at which all contend for a drink of warm blood, and for favourite portions of the intestines. Heart, liver, lungs, stomach, entrails—all are eagerly snatched, and, all raw and bleeding, are swallowed with the utmost enjoyment. Happy, indeed, is the maiden whose lover secures for her two or three yards of entrails (the Indian equivalent for the Parisian *bonbonnière*); scarcely can she spare a moment to go through the pretence of cleaning—then the hideous coil disappears down the omnivorous throat.

When all that we term offal has been thus consumed, the prize is triumphantly carried into camp. Strips of meat and of fat are hung up to dry for winter use, and the skins are prepared for clothing or for sale. I saw several



skins hanging about the trees in camp this morning, and we hear that there are some bears in the neighbourhood now, but we are not likely to have the luck of seeing them.

As a substitute for the too expensive luxury of wheat-flour, these poor creatures manufacture a sort of coarse acorn flour or meal; and very bitter bread must be the result. As soon as the acorns are ripe, they set to work systematically to harvest them, ere the woodpeckers, squirrels, and mice can do so. They construct very tall cylindrical wicker-baskets, covered all over with a thick thatch of oak or fir twigs. These are called *cachets* (which, I suppose, means a hiding-place, though whether the word was of foreign derivation or purely Indian, I cannot say). But wherever a cluster of bark-wigwams have been erected, there invariably are several of these tall baskets, like most attenuated corn-stacks.

These are the storehouses—the granaries of these frugal beings. When at leisure, they crack the acorns, and pick out the kernels, ready for use. When required, they pound them with a smooth water-worn stone on a flat granite slab; and near every favourite camping-ground, there are generally some such slabs, deeply indented with cup-marks, very much the same as some of those which puzzle our learned antiquaries, and which may possibly be nothing more than traces of a time when our own ancestors pounded the acorns of British oaks, and made bitter porridge like that of these poor Indians.

To-day I watched the whole process of manufacture,



which is primitive to a degree, and seemed like a glimpse of domestic life in the stone age. No trace of iron was there—not even a cooking-pot. The girls having prepared their acorn-meal in the rock cups (the meal being largely mingled with granite dust), they left it to steep in cold water, to get rid of some of the bitterness, while they were building up a huge pie-dish or basin of river-sand. This they lined with fine gravel, and placed the powdered acorns in this rude dish. Meanwhile others had filled their water-tight baskets—which are a triumph of art, so closely woven that not a drop of water can escape.

But how were they to boil the water for their cooking? That difficulty also was simply overcome. A large fire had been kindled, and a number of stones the size of your fist thrown in to bake. When they were thoroughly heated they were lifted out by a woman, holding two sticks in lieu of a pair of tongs, and were dropped into a small basket of water, which hissed and spluttered, and became black and sooty. After this preliminary washing, the hot stones were fished out and deposited in the large water-basket which acted the part of kettle. Though somewhat cooled by this double process, the stones soon heated the water to a certain extent.

A very small quantity of this tepid, singed fluid was then poured on the acorn-flour, some of which was made into paste and taken out to be baked as cakes. More water was added. A green fern-leaf was laid over the flour, apparently to enable the pouring to be done more gently—and so a large mess of porridge was prepared, and

ladled out in baskets. Then — that nothing might be wasted—the gravel was taken out and washed, to save the flour still adhering to it.

This acorn-paste becomes glutinous, and is eaten in the same way that the Pacific Islanders eat *poi*, by dipping in a finger, twirling it round, and so landing it in the mouth.

The oak and pine forests yield the principal food-supply of these children of the Sierras. The commonest nut-bearing pine (*Pinus Sabiniana*, commonly called the Digger-Pine) grows only on the lower hills, at an altitude of from 500 to 4000 feet above the sea. It seems to require great heat. We saw a good many on our way to Mariposa.

At first sight you would scarcely recognise it as being a pine-tree, so different is its growth from the ordinary stiffness of the family. Instead of all branches diverging from one straight main stem, perhaps 200 feet high, this little pine only attains a height of about 50 feet — the stem having at the base a diameter of from two to three feet. It shoots upright for about twelve or fifteen feet, and then divides into half-a-dozen branches, which grow in a loose irregular manner—generally, but not invariably, with an upward tendency.

From thence droop the secondary boughs, with pendent tassels of very long greenish-grey needles: they are often a foot in length, and form the lightest, airiest of foliage, casting little or no shade.

From each bunch of needles hangs a cluster of beautiful cones, which in autumn are of a rich chocolate colour.



They grow to a length of about eight inches, and are thick in proportion. Both squirrels and bears climb the highest branches in search of these, well knowing what dainty morsels lie hidden within the armour-plated exterior of strong hooked scales. By diligent nibbling, even the little squirrels manage to extract the nuts; but the Indians simplify this labour by the use of fire.

They climb the trees, and beat off the cones, or (more reckless than the bears) chop off the boughs with their hatchets. Then, collecting the cones, they roast them in the wood-ashes, till the protecting scales burst open, when they can pick out the nuts at their leisure, and crack their hard inner shells as they lie round their camp-fires at night, or bask idly in the sunlight through the long summer day. It is dirty work, owing to the sticky resin which oozes freely from the cones and branches, and adheres tenaciously to clothes and hands; nor is the cleanliness of the camp improved by every man, woman, and child handling the charred and blackened nuts.

But when it comes to a question of cleanliness, perhaps a little charcoal would be rather an improvement in an Indian camp!

Another tree which is valuable to the Indians as an item of food, is the *Pinus Fremontiana,* a stumpy little pine, rarely exceeding twenty feet in height, or forming a stem more than one foot in diameter. Its crooked, irregular branches bear a very large crop of small cones, about two inches long, each containing several edible kernels about the size of hazel-nuts, and pleasant to the taste.



They are exceedingly nutritious, and are so abundant in certain districts that a diligent picker can gather about forty bushels in a season. Consequently it is a really valuable tree, and the Indians justly regard it as the food provided by the Great Father for their special use; and many a story of bloody revenge taken by the red men against the aggressive whites has been traced to the wanton destruction of these food-producing trees by the lumberers and settlers.

This Nut-pine, like the Digger-pine, keeps its succulent kernels so securely embedded in their hard outer case, that it requires the action of fire to force open the scales within which they lie concealed. It is found chiefly on the eastern foot-ranges of the Sierras, in the districts where the Carson river and Mono Indians still dwell, and does not seem to require so much heat as the Sabiniana, as it bears fruit abundantly at an altitude of 8000 feet, whereas its larger kinsman is rarely, if ever, found higher than 4000 feet above the sea-level.

This Indian gipsy camp naturally forms a fruitful topic of conversation, and leads to many animated discussions between those men who consider all Indians "a race of scoundrels—a nation who must be obliterated from the earth!" and others who see in them a race unjustly despoiled of their heritage, and whose degradation has been certainly not lessened by the invasion of the whites.

I hear many statements made, and not denied, greatly to the discredit of the Indian Agency, which is described as the most unrighteous of the many corrupt official

bodies. And it is through their hands that the Government "charity" is now doled out to the tribes whom the white man has pauperised.

It was stated, not long ago, that out of 35,000 dollars a-year, voted for compensation to the Indians, not more than twenty per cent *ever* reached them, but in the majority of cases five per cent was a fair estimate. The rest either adhered to the hands of the agents, or was squandered by their mismanagement. And it is a well-known fact that the little that does reach the Indians does so in the form of spoilt flour, shoddy cloth, indifferent blankets, and firearms, the latter only too good, considering how often their game is human. Moreover, notwithstanding Government prohibition, they are much encouraged to purchase from the white dealers a true fire-water with large admixture of vitriol—a poor exchange for their happy hunting-grounds, where the pale-faces are now reaping their golden harvests.

Among the gentlemen most keenly interested in all Indian questions there is one who happened to be visiting the Lava-beds soon after the Modoc war of extermination, and his details of that sad story are most distressing.

He went all over the ground which was the scene of the last struggle, his object being to trace the Sacramento river to its source amid the glaciers of Mount Shasta—that magnificent peak, whose summit is crowned with eternal snows, while round its base hot sulphur and soda springs tell of still dormant fires.

Small extinct craters cluster round the broad base of



the giant cone, and have doubtless done their part in the formation of the Lava-beds, which formed the last stronghold of the Modoc Indians. They extend along the margin of the Great Tulé, or Reed Lake, so called because of its sedgy shores. It is one of a group of large lakes—Clear Lake, Klamath Lake, and Goose Lake—lying 6000 feet above the sea. The ground around is white with alkali, and only stunted cedars and uninviting sage-bush can exist.

When white men saw and coveted the fertile lands in the Sacramento Valley, the red men were driven back farther and farther into the mountains. Their hunting-grounds were taken possession of, and they themselves compelled to retreat to the grounds "reserved" for them (grounds too poor for white men to grudge to the proprietors of the soil), where the wretched sage-bush is shunned by the deer, and even the streams are without fish.

Driven back ever farther and farther, the wretched Modocs at last reached "the reservation lands," lying east of the Great Klamath Lake—a country so arid that they could not support life. So they ate their horses, and then, driven to desperation, returned to their old haunts near Lake Tulé, resolved thence to make one last effort to recover their lands or die in the attempt.

Thereupon followed the Modoc war. In old days, white men had made a pastime of shooting Indians as they would vermin; and there were some who openly boasted of having shot a hundred or more to their own gun as their season's sport. But this was when the Indians only pos-

sessed bows and arrows. Now they had pistols and good breech-loading rifles, which they had captured in various raids—moreover, they were first-rate marksmen; so the case was different, and though there were but a handful of Modocs, numbering about forty-five armed men, the whites failed to dislodge them.

The first attempt was made in November 1872, by a body of thirty-five cavalry, eight of whom fell before the fire of an invisible foe, and the rest wisely retreated.

The Modocs then proceeded to intrench themselves in the Lava-beds, taking with them their squaws and their little ones. The Lava-beds are described as being like a gigantic sponge, fossilised to the hardest rock—full of caverns and craters, with long cracks and fissures; in short, a place in which thousands of men could safely lie concealed, and where a handful of well-armed men might defy an army.

Here they were attacked on the 17th January by a force of 450 Government troops, who had not realised the strength of the position, and were forced to retire with a loss of twenty-nine wounded and ten killed.

Matters now looked serious. It was allowed by Government that the Modocs had some cause for complaint, and a Peace Commission, headed by General Canby and Dr Thomas, was appointed to inquire into their grievances, and endeavour to put matters on a better footing. General Canby was a man of large experience—a just man, and one truly desirous to see these tribes fairly dealt by.

The Modoc chiefs were accordingly invited to attend a



conference in the American camp; but vividly remembering deeds of treachery in the past, they refused to come. Finally, they agreed to meet the Peace Commissioners half-way between the camp and the Lava-beds, and hold a big talk, though each side mistrusted the other. All were supposed to attend unarmed; but in the course of the discussion, "Captain Jack," the Modoc chief, suddenly drew his revolver and shot General Canby through the head. At the same moment Dr Thomas was shot and fell dead, and a third white man was wounded.

Then the Modocs retreated to their stronghold.

At the same moment another party had advanced to the second American camp with a flag of truce, asking to see the officer in command. This was refused, whereupon they shot the officer who had come to parley. Doubtless they supposed that they had slain their principal foes, little knowing that by their deed of foul treachery they had actually murdered two of their very best friends. It seems always to be the ill-luck of savage races to revenge the misdeeds done by bad men on the very friends who are most anxious to help them.

In the present instance, the Indians practised exact retaliation for the cruel treachery with which they themselves had been treated some years previously, when a volunteer American force, commanded by a man called Ben Wright, attacked the Modocs in these same Lava-beds and was twice defeated. Wright therefore proposed to the Indians that they should come to a big dinner and talk over their disagreements, planning to poison his

guests with strychnine. Happily they did not come, but agreed to a big talk, when, at a preconcerted signal, Wright drew his revolver—an example followed by all his men. A general massacre ensued. About forty Indians were shot, and Wright was lauded as a hero.

But some of the Indians escaped, and after biding their time, contrived to murder Wright while he slept.

The Indians were hanged, but gloried in having obtained vengeance on the murderer of their people. There is little doubt that the same motive prompted the later crime, and that the tribe felt they were carrying out a just revenge in thus repeating the deed of treachery.

Very different was the view taken by the white men. Whatever grain of sympathy had previously existed was now wholly extinguished, and a howl for the utter extermination of the tribe arose from every corner of the States. The one thought was for vengeance, and a bloodthirsty craving to shoot Modocs seemed to take possession of all the whites in the country. Henceforth it was war to the bitter end. The general order issued to the troops contains these words: "Let no Modoc in future ever be able to boast that his ancestors killed General Canby."

The Indians now seemed inspired with the energy of despair. They fortified their natural stronghold till it seemed impregnable. Six hundred troops—infantry, cavalry, and artillery—with two howitzers and four small mortars, besieged the Lava-beds for several months without result. Repeated attempts were made to carry the

place by assault, but in each case the assailants had to retreat before the fire of an invisible foe.

The Indians, like other races of the Pacific, fight almost naked, and their dark-reddish skin could scarcely be distinguished from the lava around them. They have other peculiarities in common with the Pacific Islanders, as, for instance, the advance of an orator, who (in this case carefully concealed) shouted taunts and defiance to the besiegers; and also that the squaws are present during the fighting, to encourage the warriors and tend the wounded.

At length the Indians were dislodged from their stronghold by well-directed shells, which were a new experience, and took them by surprise. They still, however, found covert among the rocks, and a few days later dealt a terrible surprise to a scouting-party which had gone forth to try and track them. Seeing no sign of the Indians, the party prepared to return to camp, but first halted for a few moments' rest and food, little dreaming that the Indian rifles even then covered them. A moment more, and out of the party of sixty, seventeen lay dead, twelve were wounded, and when the survivors returned to camp, five were missing.

It seemed as if the red men were at least to retain possession of the red rocks,—and so they doubtless would have done, had not traitors finally yielded to bribery, and betrayed their brethren. They showed the pale-faces the water-springs which enabled their comrades to hold out, and these having been cut off, the handful of survivors were compelled to surrender to the all-powerful conqueror,



Thirst. Fifteen men and thirty-five women were all that remained to march out. They were bound hand and foot, and placed in waggons to be carried prisoners to Fort Klamath.

On their way they were met by a company of the volunteers from Oregon, who had so long been kept at bay by these poor desperate Indians. The Oregon white men stopped one of the waggons, cut the traces, and in cold blood shot four Indians who sat there handcuffed and helpless.

The chief and his few remaining followers were tried by a military commission, and hanged. Thus the white race have "improved" the Modocs off the face of the earth.



CHAPTER VIII.

THE STRUGGLES OF THE RED MAN AND THE WHITE — ATTACKS ON THE RAILROAD BY INDIANS AND BY BRIGANDS.

THE Indian question is apparently inexhaustible.

This evening I have been listening to the reminiscences of several real old Californian pioneers, who gathered round the blazing log-fire in the Big Tree sitting-room, and began to exchange notes of their early days in this new land—days when life was one ceaseless danger, every man being armed to the teeth, and constant enmity existing between redskins and white men.

One would imagine that some sense of fair-play might have induced a certain amount of sympathy with the wild tribes who saw their hunting-grounds so ruthlessly cleared, and they themselves driven out from every desirable resting-place; but this is an idea which apparently never found room in the mind of the encroaching whites. They wanted the land, and its natural inhabitants were looked upon as cumberers of the soil, for whom there was but one alternative—either they must "git up and git" (which is

Californian for clearing out), or else they might be shot as wantonly as the wild buffaloes of the prairies.

Small wonder if desperate men strove to better such instruction, and from time to time rallied their forces for some fierce onslaught on the intruders. But efforts which in classic story are vaunted as noble and patriotic, are apt to be considered in a very different light when seen too near; so the struggles of the wild Indian tribes are invariably spoken of as the unmitigated treacheries of devils.

Of course, in the kind of guerilla warfare which was ceaselessly waged, there were countless incidents of cold-blooded cruelty on the one side, and of reprisals on the other; and after hearing a score or more of such anecdotes, told by men who perhaps themselves bore a part in the fray, it is hard to tell which side most deserves one's sympathy, or rouses one's horror. It is all such a pitiful history, and it does seem so hard that the earnest solemn red men, so picturesque in their barbaric feathers and war-paint, could have been taught no conciliatory lesson by their white brothers—nothing but the oft-enacted deeds of never-ending aggression, by which they have again and again been compelled to retreat farther and farther into the wilds, before the ever-advancing wave of settlers, to whom all pleasant pastures and desirable streams and springs were sites to be coveted, and therefore appropriated.

Some of the most thrilling stories told this evening were of attacks by the Indians on travellers crossing the great prairies, and of wild headlong gallops for life. The Indians

had a special aversion to white men disturbing these hunting-grounds, and resented it accordingly.

Some of their best-planned attacks were on the overland stage-coaches, which were run right across the continent before the days of the Great Pacific Railroad, and which might be expected to yield a booty worth capturing. Of course the driver, guard, and passengers were all heavily armed, and the teams were kept in such first-rate condition as rather to enjoy a gallop with the wild Indian ponies tearing after them in hot pursuit.

It was found necessary to station troops all along the main road, and a military escort occasionally accompanied the coach from one station to another in districts where danger was apprehended. The stations themselves were frequently attacked, as the supplies of all sorts which were there stored, and the relays of excellent horses, offered irresistible temptation to the wild men.

The military established forts at intervals across the country; and the Indians, never lacking in bravery, attacked them in these strongholds. Some of the fiercest skirmishing took place in the neighbourhood of Fort Laramie, Fort Morgan, and Fort Sedgwick, near to where Julesburg Station now stands. On one occasion the Sioux and Cheyennes mustered a body of upwards of a thousand men, and prepared to attack Fort Laramie, where, as it happened, only about fifty men were then stationed.

The officer in command told off a dozen men to defend the fort and work the two guns, while he rode out at the head of the others to meet the assailants. It was not till they

reached a projecting bluff, distant about a mile from the fort, that they realised the number of their opponents. The Indians charged furiously, and the cavalry were compelled to retreat, leaving fourteen of their number dead on the field. They succeeded in reaching the fort, which was quickly surrounded by the foe; but Indian arrows, or dubious guns and pistols, could avail little against artillery, and when morning dawned not one red man was in sight. Neither were any of their dead or wounded left on the field. All had been carried off, true to their ancient custom,—no easy matter, as it was subsequently ascertained that they had lost upwards of sixty men on this occasion.

Unhappily the savage nature betrayed itself in the terrible maltreatment of their dead foes, who, without exception, were left stripped and mutilated, affording a terrible incentive to vengeance in the hearts of the sad, stern men who on the morrow rode forth to bury their comrades.

The barbarous element was unfortunately continually presenting itself to stir up and quicken the abhorrence with which the white men ever regarded the wild tribes; and raids for horse and cattle stealing, plunder and burning, such as find many a parallel in our own Border warfare, were invariably salted with the one horrible crowning indignity of scalping the victims, regardless of age or sex.

About ten years ago these raids became so frequent and so alarming that it became necessary to take serious

measures to put a stop to them. The chief difficulty lay in contriving to bring the slippery foe to an encounter, their policy being to appear and disappear again as if by magic. At sunset a settlement might seem prosperous and secure—no sign of danger near—and perhaps ere dawn only a heap of blackened ruins, and the scalped corpses of the victims, remained to prove that the Indians had visited the spot; but of themselves no trace remained.

The only possibility of tracking these marauders was by securing the aid of the friendly Pawnee Indians, who were familiar with every trail within some hundred miles. About two hundred of these men were enlisted as scouts, and formed into three organised corps. These wary allies undertook to guide a strong force of regular cavalry, and started in search of their natural foes, the Sioux and the Cheyennes.

Following dubious trails, winding by turns in every direction—north, south, east, and west—passing through valleys and creeks, till they had travelled several hundred miles, they at length tracked them to a ridge of high land, where about five hundred men, women, and children were encamped at a place known as Summit Springs, the only good water to be found within many miles.

The difficulty of the matter was for troops to approach without being discovered, so as to prevent the Indians from vanishing as effectually as was their wont. But the Pawnees were as wary as the Sioux, and knew every pass and ravine far and wide; so they were able to guide the white troops by circuitous paths, marching upwards of

fifty miles in order to steal upon the enemy from the only direction which had been deemed so secure as not to require outposts.

So warily did they advance, that no alarm was raised till they were within about a mile of the camp, when the Sioux caught sight of the cavalry. Then, with a wild cry of warning to the women, they ran to catch their horses, which were feeding at some distance; but it was too late. The Pawnee scouts made the very heavens echo with their savage war-whoops as they led the charge, followed by the cavalry, and a short but furious hand-to-hand fight resulted in the total defeat of the Sioux and Cheyenne Indians.

Of their two hundred warriors, about a hundred and sixty were slain. Some concealed themselves in a deep ravine with precipitous sides, where they could defend themselves in a close engagement; but their assailants knew better than to approach, and kept up a steady fire till they had reason to believe that none survived. Then approaching warily, they found one woman and sixteen men lying side by side all dead. Among them was the Sioux chief, known as Tall Bull.

The camp yielded large booty on this occasion, as, besides the usual strange Indian head-dresses, moccasins, and buffalo-robes, there was much spoil in the way of plunder obtained in the recent forays. About six hundred horses and mules were captured, and a considerable number of women and children. These were kept prisoners for a few weeks, and were then sent to other Indian settlements in more civilised districts.

In the camp were found two white women who had been taken prisoners in some of the raids. On the approach of the rescue-party the Sioux chief, Tall Bull, shot them both, and left them for dead. One was fatally wounded; but the other recovered, and eventually married one of the soldiers who had rescued her. Much property which had been stolen from her father was found in camp, and was restored to her; but the recollection of the insults endured by herself and her sister-victim, and of the cruelties practised on them by jealous Indian squaws, evermore abides on her mind as a haunting memory of horror.

This is a topic on which it is scarcely possible to touch, yet herein lies the secret of the unconquerable abhorrence with which white men regard the Indians. Such is their indescribable cruelty, that men who know no other fear, yet stand in such dread of the possibility of capture, that they are careful never to expend their last shot, reserving it in order to take their own lives rather than fall into the hands of men to whom the barbarous torture of a prisoner is a delight—the very women showing their ingenuity by devising fresh refinements of cruelty, and gloating over the prolonged agonies of their victim. Deeper depths of atrocious brutality await the female captive, be she Indian or foreign; but the fate of the white woman is invariably intensified in horror.

As a matter of course, such incidents, oft-repeated, have stirred up the natural antipathies of race to the highest pitch, and have too often led the pale-faces to



deal with all Indians as though they were all alike — incarnate devils. Witness the resolutions for their total extermination which, some years ago, were actually passed by the Legislature of Idaho.

"*Resolved* — That three men be appointed to select twenty-five men to go Indian-hunting; and all those who can fit themselves out shall receive a nominal sum for all scalps that they may bring in; and all who cannot fit themselves out, shall be fitted out by the committee, and when they bring in scalps, it shall be deducted.

"For every Buck scalp be paid one hundred dollars, and for every Squaw fifty dollars, and twenty-five dollars for everything in the shape of an Indian under ten years of age.

"Each scalp shall have the curl of the head, and each man shall make oath that the said scalp was taken by the company."

So the Indians were first exasperated beyond all endurance, and were then shot and scalped, with as little pity as though they had in truth been dangerous wild beasts.

Small wonder that of the two million Indians who, two centuries ago, held undisturbed possession of those vast hunting-grounds, only 300,000 now survive; still smaller wonder that, of these, one-third are classed in official statistics as "barbarous," and another third as "semi-civilised." The greatest marvel is, that one-third should be classed as "civilised." Nevertheless, Bishop Whipple of Minnesota, in addressing the President of the United States on the Indian question, has distinctly asserted that there



does not exist one tribe to whom the Government has given Christian civilisation.

He points out, in the plainest terms, that the oft-repeated horrible massacres, followed by very expensive retributive Indian wars, have invariably been the direct consequence of aggression on the part of the white men, non-fulfilment by Government of the conditions of treaties (conditions made by the whites, but infringed so soon as they were found in any way inconvenient), and, most fertile cause of all, frauds by the Indian agents intrusted with the administration of Government compensation money.

As for treaties, they are apparently only made to be broken; not one is ever faithfully carried out, and those best cognisant with Indian affairs, affirm that there is not a tribe in all the great wide continent which has not just cause for well-founded complaints of the way in which treaty obligations have been evaded, and the manner in which they have again and again been deceived by Government promises, till all possibility of faith is quenched. No wonder that oft-repeated lessons of aggression and violence should have roused and intensified the very worst features of the Indian character, and excited the savages to deeds worthy of the devils with whom they are classed.

But I think that if the same policy had been pursued with any other savage race (the Fijians, for instance), the result would have been identical; whereas, in their case, the devotion of a handful of Christian teachers has trans-

formed a whole race of most barbarously cruel cannibals[1] into a nation of singularly consistent Christians. There can be little doubt that, had the tribes been first reached by such influences, and then honourably dealt with, the Indians in the United States would now be as peaceable and orderly as their brethren in Canada, where they are recognised as the Indian subjects of our Queen, and are schooled, Christianised, civilised, and protected by the laws in full enjoyment of their personal rights and property.

How fully the "savages" recognise the difference of the white men who keep faith with them and those who do not, is plainly proved by the fact that whereas the United States have expended 500,000,000 dollars on wars with the Indians to avenge massacres without number, the Canadian Government has never had one massacre to avenge, and the white men and the red there dwell together in peace and amity.

One of the old Californians gave us some thrilling sketches this evening of the attempts to prevent the progress of the great railroad across the continent. This man was actually engaged in several skirmishes, when the Indians attacked the engineers and navvies, and sometimes

[1] Only one tribe of North American Indians have the reputation of being cannibals—namely, the Tonkaways, who declare that their ancestors instituted the horrid practice, not to satisfy hunger, but to gratify revenge. They are found in the south-east of Texas. By a refinement of cruelty far in excess of that of the average cannibals of the South Seas, they cut slices from their living victim, who lies writhing on the ground in indescribable agony, while they sit by the fire roasting and devouring his flesh.



succeeded in driving them away from their work, when, of course, the savages proceeded to destroy everything in their power. Even after the line was completed, and trains running, the Indians repeatedly contrived to tear up the lines, on purpose to cause frightful accidents; then in the confusion that ensued, they swooped down like evil birds of prey, to pillage the wrecked train, and scalp the wounded and the dead, and straightway made off with their booty and horrible trophies.

One man who was thus scalped had only been partially stunned, and the sharp cut of the Indian's knife brought him to his senses so far, that he instinctively threw out his arms, caught the savage, snatched the scalp from his hand, and succeeded in making good his escape in the darkness. That man survived, and is now employed as an official on the railway.

A favourite point of attack was at Plum Creek — so called after a stream which flows between great rocky bluffs, and finally joins the Platte river. In old days it was one of the principal stations of the stage-coaches, and was therefore especially obnoxious to the Indians, who lost no opportunity of giving trouble. In one of their attacks, a dozen white men were killed and many wounded. When, however, notwithstanding all their opposition, the railway was completed, they selected this place as the scene of a villanous piece of work.

Having determined to wreck the train, they deliberately lifted the rails just where a bridge crossed a deep ravine; of course the whole concern went over, and engine, car-

riages, and waggons landed at the bottom in one terrible heap of ruin. The wretched fireman and engine-driver were appallingly injured; but their agonies, if intensified, were at least shortened by the fire, which quickly spread from the engine to the broken waggons and carriages, affording a magnificent illumination for the miscreants, who, having concealed themselves in the ravine to watch the success of their little game, now rushed out with frantic yells of delight, and proceeded to sack the train, tearing open bales of merchandise, and especially rejoicing over gay calico and bright flannels. Having secured as much as they could carry, they made off in the grey dawn; and when, a few hours later, a relief-party arrived, they found only the burning train, but no trace of the route taken by the Indians.

As usual, it was necessary to call in the help of the friendly Pawnee scouts, who were posted in detachments all along the railway track, for the express purpose of guarding it against the Arrapahoes, Sioux, Cheyennes, and other hostile tribes. With the aid of the telegraph to summon and the railway to bring these men and their horses, about fifty scouts and four white officers reached the scene of the disaster by midnight.

A party of ten men were at once told off to discover in what direction the enemy had started, and though to the eyes of white men not a track was visible, the keen-sighted scouts soon struck the trail. They followed it all day, noted where the foe had crossed the stream, and from various indications which they alone could recognise,

decided that the cruel deed had been done by a party of Cheyennes from the south. They thought it probable that these would shortly return to try and do further mischief, and so decided not to pursue them, but rather to lie in ambush, making their own. camp in a ravine near the scene of the disaster.

They had not long to wait. About a week later the marauders were discovered in the distance. The avengers waited till they had taken up their quarters for the night on the opposite side of the river Platte. When the horses had been turned loose, and their riders had settled down to make themselves comfortable for the night, then the Pawnee scouts, led by their white officers, proceeded to cross the river, and stealthily making their way through the scrub, succeeded in approaching very near the Cheyenne camp ere their presence was detected.

At last the alarm was raised, and in wild excitement the Indians dashed off in pursuit of their horses. They had just time to secure these, and form in regular ranks, when the Pawnees charged through an intervening stream, and with wild war-whoops rushed to the attack.

The Cheyennes numbered 150 warriors, and the Pawnees were but 50; but the suddenness of the attack had unnerved the former, and at the first charge they gave way, and fled pell-mell, hotly pursued by the scouts, till the darkness of night enabled them to make good their escape, leaving fifteen of their number dead, whereas not one of the attacking party was even wounded.

The Pawnees, of course, carried off the scalps of their

fallen foes, to ensure their never reaching the happy hunting-grounds, and returned to camp to exhibit these precious trophies, and spend the night in wild war-dances of triumph. They succeeded in capturing a boy chief and a squaw, who were subsequently exchanged for six white girls and boys who had been carried off by the enemy in a previous raid.

The Cheyennes seem to have profited by this wholesome lesson, for they do not appear to have taken part in any further attacks on the railway; but the Sioux continued troublesome for some time—constantly attacking working-parties, firing at trains, and sometimes endeavouring to wreck them. On one occasion they succeeded thoroughly, and exactly repeated the horrors so ably planned by the Cheyennes at Plum Creek.

This time the scene of the disaster was a creek near Ogalalla. The rails were turned up, the engine fell headlong, dragging all the cars on the top of it. The unhappy fireman was jammed against the boiler in such a position that the flames could just reach him. For six long hours he endured the torture of a slow death of agony, praying the helpless bystanders in mercy to end his anguish by shooting him. At last they succeeded in extricating him, but he only survived a few moments.

On this occasion the railway officials and passengers were well armed, and made such good use of their weapons, that the Indians dared not approach to plunder, and eventually made off. They were tracked and pursued by the invaluable scouts, supported by two companies of



white cavalry; but the latter unfortunately neglected to extinguish their camp-fires with due precaution, and the result was a terrible conflagration—one of those appalling prairie-fires which from time to time desolate vast tracts of the sun-dried grass plains, licking up farm-buildings and crops, extending to the forests, and sweeping onward in vast tornadoes of flame.

These bush-fires are of annual occurrence in some part of the great continent; and terrible beyond description must be the waves of fire, sometimes extending over many miles of country, and rushing onward as if driven by a hurricane, when the whole heavens are black with stifling smoke. And men and cattle flee for their lives, only to be overtaken and swallowed up by the devouring flames.

I wish you could hear some of these men tell their own stories of their hairbreadth escapes, and of the terrible scenes they have witnessed—scenes to haunt a man to the last hour of his life, so magnificent in their awful grandeur and horror. Sometimes the draught created by the flames themselves is so great that it carries with it large pieces of glowing charcoal, which flash like meteors through the dense clouds of smoke, and falling to the ground perhaps miles ahead of the main body, ignite the parched scrub, and form fresh centres of destruction. Conceive the anguish of finding one's self hemmed in between such walls of living flame. Even if the farther fire has swept onward ere the first overtakes it, the scorching smoke is of itself enough to choke all living creatures, and the chances of escape by flight are small indeed.

Under such circumstances as these, you can imagine that the Indians of whom we were speaking were allowed on that occasion to escape scot-free. However, they seem to have then begun to realise that their attacks on railway trains were likely to call forth condign punishment, so they have abandoned that pastime to the more enlightened white brigands, who to this day occasionally amuse themselves pleasantly by heaping stones and logs on the track sufficient to wreck the train if it refuse to stop in obedience to their signals. The engine-driver, seeing the signal-lantern waved, stops as a matter of course, supposing it to be carried by the authorised signalman.

Then the whole band of masked robbers appears, armed to the teeth. If the officials offer resistance, they are overpowered by numbers, or yield to the persuasive influences of revolvers. The passengers are likewise held passive, and compelled to hold up their hands while their pockets are rifled; ladies are relieved of their jewellery, luggage is broken open and valuables abstracted, and if the safe of the express-car cannot be wrenched open by main force, the simple method adopted is to fill the key-hole with explosives and blow it open. In most cases this playful exploit is rewarded with a rich booty in money and valuables.

Should any rash officials venture to try and defend their charge, they are quieted by having the muzzles of revolvers applied to either temple; and though their lives are, *if possible*, spared, they are probably stunned by a judicious blow, which keeps them quiet for a while.



Having secured all they want, these considerate highwaymen then assist the railway officials to clear away the stones and logs, and to start the train again; while they themselves collect their booty and gallop off into the depths of the forest. You see, this is a great country, and whatever is done at all, is done on a large scale, and with characteristic coolness and forethought!

CHAPTER IX.

RIDE TO GLACIER POINT—VIEW OF THE MERCED AND LYELL GROUPS—A NEW REST-HOUSE—FROGS' CHORUS—VERNAL AND NEVADA FALLS—A SECLUDED INN—CLOUD'S REST.

May 10th.

THE owners of the sure-footed horses of the valley pride themselves on the fact that there has never yet been an accident, though hundreds of tourists, who look as if they had lived all their lives in paved cities, and are wholly guiltless of any notion of riding, annually deliver themselves over to the guides, who place them on the backs of unknown ponies, arrange them in Indian file, and adroitly steer them up and down most fearfully dangerous trails, where one false step or stumble would probably land pony and rider right down in the valley, in the form of a jelly.

I had a very near shave myself to-day, and rather wonder at finding myself here in safety. Early this morning we started with our two English friends to scale the precipitous rock-walk, on the opposite side of









the valley from the Great Falls. The place we wished to reach is called Glacier Point, and forms a grand headland 3200 feet above this house.

It is apparently inaccessible, but by going some way down the valley, you strike a skilfully contrived trail, which starts backwards and forwards in about sixty zigzags, passing right along the base of the Sentinel—that stupendous rock-needle which towers 3000 feet above the valley.

You must always remember that the valley itself is 4060 feet above the sea, and the height of all these crags and waterfalls is only reckoned from this level; so, to estimate their true height, you must always add on 4000 feet.

We found the snow lying pretty thick on the upper trail, and in some places passed through cuttings where it lay ten feet deep on either side. It had been cleared by men who are building a wooden rest-house on the summit, for the comfort of summer travellers. It is a promising-looking place, perched like an eagle's eyrie, on a very commanding crag.

As we were toiling along one of the steepest and most dangerous bits of the ascent, I suddenly became aware that my saddle-girths had slipped, and that the saddle was in the act of sliding round, and in another moment should inevitably have come to most frightful grief, had not Mr Glazebrook, who was riding behind me, perceived the position of affairs; and in one second, before I had time to realise what had happened, he leaped from his horse, and caught me in the act of falling, thereby cer-

tainly saving me a broken neck, and sparing the valley a tradition which would for ever have pointed the moral of the advantages of Mexican saddles *versus* English.

It was rather a risky moment for my rescuer as well as for myself. Happily both our beasts behaved splendidly, and stood stock-still till the saddle was safely replaced. They certainly are excellent animals, sturdy and intelligent, and seem rather to enjoy climbing trails steep as ladders, or a headlong scramble over rocks and rivers, fallen timber, or whatever comes in the way. Sometimes they have to clamber up a sort of stairway formed by the twisted roots of trees—paths which would make the hair of a low-country horse stand on end!

Having scaled the walls of the valley, we found ourselves in a pine-forest, where the snow lay pure and deep, and the breeze sweeping across the broad snow-fields of the Sierras was piercingly chilly. The sun, however, was shining brightly, and the views looking down to the valley were beautiful beyond description; while in every other direction they were stern and wild—a bleak, cold expanse of grey granite ridges and snow and dark pine-forests.

Here and there, like crested waves on a grey billowy ocean, rose a cluster of snowy peaks, such as the Obelisk or Merced group, at least five of which are upwards of 13,000 feet in height. One of these (originally called the Obelisk, but now Mount Clark) is so sharp a pinnacle of granite, that the few adventurous climbers who have scaled it, say they felt as if poised in mid-air.

This is a side-range running parallel with the main crest of the Sierras, where a grand regiment of peaks, also rising to upwards of 13,000 feet, are known as the Mount Lyell group. Hundreds of points along this crest exceed 12,000 feet. The actual summit of Mount Lyell is an inaccessible pinnacle. These two ridges are connected by a transverse range, which forms the divide between the head-waters of the Merced and San Joaquin rivers.

The former rises near the base of Mount Lyell,—between it and the five peaks of the Merced group. From that upper world it travels downward, hurrying as it draws near the valley. In the last two miles it descends 2000 feet by a series of rapids and cataracts, varied with two great leaps, forming, first the Nevada, and then the Vernal Falls.

Then for a little space the weary waters have rest, after their wild, rushing, dashing, tumultuous race and headlong fall from their mountain birthplace to the quiet valley—a little rest, while the river of Mercy flows westward through the green meadows—truly green pastures beside still waters, for the silvery stream only descends thirty-five feet in the next eight miles! Then resuming its troubled journey, it suddenly disappears in the rocky canyon, and rushes downward to the thirsty plain.

All this lay outspread before us, as we stood on the giddy brink of a glacier-polished, pine-fringed[1] precipice, of the very whitest granite; and right in front of us towered the Half-Dome, which certainly is an altogether

[1] *Pinus Jeffreyi.*

unique creation—utterly unlike anything known in any other country. It is far more imposing as seen from this side of the valley than from the other, as you get it *en profil*, with the stupendous precipice facing the valley, and, on the other side, the wonderful curve of the dome from the crown to the base. I can see, however, that there are two points from which we should obtain still grander views of this gigantic rock-mass. One is the Sentinel Dome, very near Glacier Point, but 1000 feet higher. The other is the summit of Cloud's Rest, which towers 6150 feet above the head of the valley: so, if we can get there, we shall see it to perfection. Next in steepness to the Half-Dome is that which bears the name of Starr King—a singularly smooth, bare, and inaccessible cone of granite, surrounded by a whole family of little cones.

A smaller dome of the same character, which the Indians called Mahta, is now known as the Cap of Liberty. It is a cap 3100 feet high, but is dwarfed by its great neighbour, and altogether is less worshipful.

The cold breeze was so biting that we were thankful to take refuge, with our luncheon-basket, in the newly built wooden house, and agreed that it would make delightful summer quarters. It provides a good kitchen and sitting-room, and several small bedrooms, and will be a grand place from which to study sunrise and sunset effects. Then only could one hope for rich colouring and broad shadows. But beneath these cloudless blue skies and bright noonday glare, the Sierras look unpleasantly cold and grey, and the scattered pines lie singly or in patches,



giving the whole scene a speckled look, which is more wonderful than attractive to my eyes.

At the risk of heresy, I confess that to me the desolation of the scene is repellent. Those hard angular masses, which show no symptom of weathering — those jagged pinnacles, which cut so sharp and clean against the cold blue sky—and the endless ranges, all gashed and seamed, —are savagely grand, but most unlovable.

My eyes have not yet lost the memory of the fantastic peaks and rock-needles of the Society Isles—their rich basaltic colouring and wealth of tropical foliage,—and, by contrast, the South Seas appear more enticing than ever.

I felt glad when our faces were once more set towards the valley; for each step revealed it in some new aspect of beauty, with ever-varying foreground of great rock-boulders or sheer precipice, and gnarled weather-beaten pines with weird arms outstretched to the abyss. One foreground was so quaint, that I felt compelled to stop and sketch it,—a gigantic, somewhat oval boulder, poised on one end, so as to form a tall pillar. (I do not think it is really a boulder, but it looks like one.) In honour of Agassiz, it is called his Thumb.

Exactly facing me while at this point, although distant two miles, on the opposite side of the tremendous gorge, were the great Yō-semité Falls, visible from the very summit to the base; and a multitude of temporary falls, born of the melting snows, floated in silvery rills and clouds of white spray, at all manner of unaccustomed

points. So through the great stillness of the upper world there floated faint murmurs from all these falling waters, mingling with the roar of the rivers rushing down the canyons, but all softened and blended to one harmonious undertone—

"The many mingling sounds of earth, which men call silence."

On our way down through the snow-cuttings, we had rather an awkward meeting with a long file of mules heavily laden with furniture—or rather, portions of furniture—for the new house. There was some difficulty in backing to any spot where it might be possible to pass. However, this was safely accomplished. Further difficulties awaited us at the zigzags, where we met a party upward-bound, and passed one another with many qualms. A skittish pony or mule would be fatal; but these are all apparently beyond suspicion of any such frivolity.

It felt warm and comfortable coming back to the sheltered valley; and the loveliness of the evening tempted me to a stroll along the flooded river, which now forms wide pools, in which the stately pines and the tall poplars lie mirrored, framing the reflections of the great mountains—a series of beautiful pictures, solemn and still.

Gradually, as the evening crept on, the blues in the valley intensified. The grey granite crags were flushed with warm rosy light, deepening till, for a few short moments, they seemed ablaze, while the grey clouds above them were fringed with floating films, fire-tinted; then suddenly the red glow died away, to be replaced

by a pale ashen-grey, and the deepening gloom of twilight.

The green spires towered darker and darker against the glittering golden sky, till that too became darkened, and gradually assumed that rich velvety blue which is so marked a characteristic of a Californian night, and seems to intensify the radiance of the brilliant moon.

It is full moon just now, and the nights are so beautiful, that after the *table d'hôte* dinner, most people are beguiled to forget their weariness and take a turn, ere the final "toasting" by the log-fire. The effect of pallid moonlight on these white cliffs is most poetic. Every hard line is softened, and an even, dreamy tone pervades the whole, though one side of the valley lies in deep blue-grey shadow, and the other in clear white light; and above the dark precipitous cliffs tower the silvery-grey domes, meet thrones for the moonbeams.

Now that the annual May floods have transformed a large part of the meadows into a clear calm lake, we understand what at first seemed an inexplicable mystery —namely, why a raised wooden pathway has been built right across the meadows, between the two hotels. If the waters go on rising, it will soon be a necessary bridge. The considerate guardians of the valley have placed wooden seats at intervals all along this half-mile bridge; and here, on these lovely evenings, we rest in pleasant knots, and listen to the chorus of innumerable frogs, which seem to have suddenly awakened from their winter sleep, or, at any rate, to have recovered their voices. The gentle-

men declare that they are classic frogs, singing a Greek chorus after Aristophanes, and that the oft-repeated burden of their song is—

Brek kek kek kex ! coax ! coax !

May 15th.

We have been away for two days on an expedition to the upper valley, passing from one glory to another.

Our Anglo-Mexican friends preceded us, and finding quarters at a rough-and-ready, but very clean, little wooden rest-house, sent us back a message to say we must follow immediately with the sketching-blocks and plenty of warm clothes, as it was very cold, but indescribably beautiful.

So at 6 A.M. we started, by a path leading along the base of the cliffs, among ferny, moss-grown boulders, where grand old oaks outstretch gnarled boughs, to frame dreamy pictures of rock and river. At this early hour the giant crags seem robed in purple; you can scarcely realise that they are the same, which an hour later will be transformed to creamy-white granite. And the Glacier Point, which faces the rising sun, shone like polished alabaster as we passed up the valley; but as we looked back to it when the sun was westering, it presented one of the grandest pictures of mountain gloom that could possibly be imagined.

How you would rejoice in the exhilarating freshness of these early mornings! With every breath you literally









THE MAY [illegible] IN THE VALLEY



seem to be taking a new lease of life, and to develop energies undreamt of. The air is so keen and sparkling that it seems to brace you up and give you new physical and mental strength, it is so elastic and invigorating.

When we came to the head of the valley, whence diverge the three rocky canyons, we bade adieu to the green meadows, and passing up a most exquisite gorge, crossed the Illillouette by a wooden bridge, and followed the main fork of the Merced, up the central canyon. I do not anywhere know a lovelier mile of river scenery than on this tumultous rushing stream, leaping from rock to rock, sweeping round mossy boulders, and falling in crystalline cascades—the whole fringed with glittering icicles, and overshadowed by tall pine-trees,[1] whose feathery branches fringe the steep cliffs and wave in the breeze.

Presently a louder roar of falling waters told us that we were nearing the Vernal Falls, and through a frame of dark pines we caught a glimpse of the white spirit-like spray-cloud. Tying up my pony, we crept to the foot of the falls, whence a steep flight of wooden steps has been constructed, by which a pedestrian can ascend about 400 feet to the summit, and thence resume his way, thus saving a very long round. But of course four-footed creatures must be content to go by the mountain; and so the pony settled our route, greatly to our advantage, for the view thence, looking down the canyon and across to Glacier Point, proved to be about the finest thing we have seen, as an effect of mountain gloom.

[1] Chiefly *Pinus Douglasii*.

At the foot of the pass we met an English lady and gentleman on foot. Un-British like, we actually exchanged greetings! Two keen fishermen met on common ground; then we discovered such home-links as determined us to meet again; but having made no definite tryst, we missed one another in each attempt, and I have just received a note of farewell as they leave the valley.[1]

Just above the Vernal Falls comes a reach of the river known as "The Diamond Race,"—a stream so rapid and so glittering, that it seems like a shower of sparkling crystals, each drop a separate gem. I have never seen a race which, for speed and dazzling light, could compare with these musical, glancing waters.

For half a mile above it, the river is a tumultuous raging flood, rushing at headlong speed down a boulder-strewn channel. At the most beautiful point it is crossed by a light wooden bridge; and on the green mountain-meadow just beyond, stands the wooden home, to which a kindly landlord gave us a cheery, hearty welcome.

Here the lullaby for the weary is the ceaseless roar of the mighty Nevada Falls, which come thundering down the cliffs in a sheer leap of 700 feet, losing themselves in a deep rock-pool fringed with tall pines, which loom ghostly and solemn through the ever-floating tremulous mists of fine spray.

It is a fall so beautiful as fairly to divide one's allegiance to Yō-semité, especially as we first beheld it at about three in the afternoon, when the western rays of the

[1] A year later we met in Japan, and ascended Fuji-yama together.







THE NEVADA AND VERNAL FALLS.



lowering sun lighted up the dark firs with a golden glow, and dim rainbows played on the spray-clouds. It was as if fairy weavers had woven borders of purple and blue, green and gold, orange and delicate rose-colour, on a tissue of silvery gauze; and each dewy drop that rested on the fir-needles caught the glorious light, and became a separate prism, as though the trees were sprinkled with liquid radiant gems.

When hunger drove us from the worship of the ethereal, and a vulgar craving for the flesh-pots of the valley drew us back to the little inn, we were delighted and considerably astonished at the excellence of the abundant meal that awaited us, and felt as deeply humiliated as Sunday-school children at the end of a tea-fight, when we were compelled to hurt the feelings of our hospitable and highly conversational landlady by the assurance that we really were unable to do further justice to her apple-pies, hominy-cakes, turnovers, and concluding trifles.

Thus refreshed, we were again irresistibly attracted to the river, and stood on the wooden bridge in the brilliant moonlight, watching the impetuous rushing and wrestling of the raging waters—a wonderful and most fascinating sight. But I have so long revelled in the soft balmy moonlight of the tropics that I could not endure the cold at this high level, and was thankful to return to the blazing fire of pine-logs, which crackled so invitingly on the wide hearth.

Next morning we breakfasted soon after five, and then started for Cloud's Rest, taking the pony to help me where

it was possible. First we had to climb a steep zigzag trail, cut partly in the face of the rock, and up the canyon, till we reached the summit of the Nevada Falls, which, when thus seen *en profil*, are beautiful beyond description. The rocks are so tumbled about, that instead of falling quite straight, the river plunges at several angles, forming magnificent curves, and separate showers of water-rockets; while below, all blend in a chaos of dazzling whiteness, which loses itself in the spray-clouds. Now that the river is in flood by the tribute of countless snow-streams, it is simply a mad torrent, bewildering to gaze upon, although so beautiful.

We had now reached the Little Yō-semité, which lies 2000 feet above the Great Valley. It is a mountain-meadow, about a mile in depth, by four in length, enclosed by mighty rock-walls 3000 feet in height. Through these peaceful green pastures glide the still waters of the Upper Merced, clear as crystal.

Our path wound round the back of the Half-Dome, at which we gazed, lost in wonder. From this side you would never suspect the cleavage which has presented an absolutely vertical precipice to the valley. Here we see only an exceedingly steep and lofty dome, rounded at the summit, and taking a steeper and ever steeper curve as it descends. To me it is inconceivable that any one can ever find nerve or wish to ascend it. I have already told you how George Anderson accomplished this, but no one has yet made the ascent this year.

Every winter's frost loosens some of the bolts, and only

a cat-like climber, with careful and wary foot and hand, and steady head, can replace these missing links. This winter the rope itself has given way. Nevertheless our two friends were determined to attempt the ascent. As a matter of course they failed, and had the narrowest shave of falling right into the valley. So we may well congratulate them on having escaped with unbroken necks.

Still ascending, we passed through belts of dark pine-forest, and across open glades; then over great slabs of glacier-polished granite, thickly strewn with "perched blocks," the boulders carried here by ice-rivers in bygone ages—a fitting foreground to the cheerless mountain-ranges beyond. Nowhere have I seen such granite slabs as these, nor such a multitude of ice-boulders as mark these ancient moraines. They are of all sizes—from that of a large cottage to a child's head; while smaller fragments form a fine gravel.

In such a scene of cold desolation—"a barren land, and a poor"—it was pleasant to meet with one symptom of joyous life, in the merry little chip-munks, the most frolicsome of the squirrel family, almost as tame as the grey squirrel of India. They are for ever darting about the rocks and trees, chattering in the most confiding manner.

I also hailed with delight several flame-coloured spines of the strange Californian snow-plant, which I told you we found in the forest at Mariposa, and which, like our snowdrop, is the first blossom to tell of a coming spring—the first symptom that the newly thawed earth has begun to awaken from its winter sleep.

Leaving the pony in a sheltered nook, we made our way across the flank of Cloud's Rest, till the snow became so deep that I could go no farther, so halted at the foot of the great summit-rock. But our friends were determined to scale that white world, which we knew could be done quite easily. Unfortunately, however, we had struck a wrong trail, and the point from which they started was inaccessible at all times, and doubly dangerous now, as the snow turned to ice under their feet. So they narrowly risked a rapid descent into the valley, which lay 6000 feet below them, with not a bush or tree or jutting rock to give them a chance of escape. I do think that, judging from our own experiences, the good angels whose charge it is to "bear us up, lest we dash our foot against a stone,"[1] must have anxious work here in the tourist season!

The actual height of Cloud's Rest is 9950 feet. It forms the crowning point of the ridge from which the Half-Dome rises, and, like it, is built of huge overlying plates of granite of curious concentric structure, the whole welded into a gigantic mass of solid crag.

It is almost incomprehensible how any life, animal or vegetable, can exist on such inhospitable ground; but a considerable number of very old gnarled cedars have contrived to establish themselves so firmly, that not all the storms that sweep the Sierras have been able to uproot them. Their twisted, irregular boughs—bent and sometimes broken by the weight of snow and the fury of the wintry winds—tell their story as the rugged lines on an

[1] Psalm xci. 11, 12.

old weather-beaten face tell of the strifes of life which have engraven them.

These old-world trees are wonderfully picturesque. Many of them are merely huge shattered stumps, battered warriors, which have lost limb by limb in many a hard-fought battle with wind and tempest.

They are the sturdiest, stumpiest, most determined, and most enduring of trees — thick-set, with gnarled, contorted branches, that have braved the tempests of a thousand years or more—and still contrive to clothe themselves with close patches of rich, cool green foliage, rendered doubly valuable by its contrast with the warm cinnamon-colour and deep red-browns of the stem and boughs and rugged bark, and with the cold grey of the dead branches, and the granite world around. They form the only points of positive colour in all the bleak, vast landscape—the patches of lichen on their deeply furrowed bark, gleaming like flecks of mellow sunlight.

Even in death, the red cedar[1] will not yield, but holds its grip of the rock so firmly that the wildest wintry gales cannot dislodge it; and so the stanch old veteran remains in its place, stretching out weird, white, ghostly arms, and yielding to the weathering influences of sun and frost as slowly and as unwillingly as the granite crag to which it clings. Each rugged tree is a study for an artist; and the specimens scattered along some of these high rock-ledges would make the fortune of the man who could paint them faithfully.

[1] *Juniperus occidentalis.*

It was a wonderful scene that lay outspread around us. Serrated ridges, separated by awful chasms, whose sunless gloom was intensified by the sombre blue-black foliage of the pine-forests—those in the distance assuming a purple hue. On every side uprose snow-streaked pinnacles, cold and grey, the highest ranges glistening in unsullied light against the clear blue sky.

On the right, the boulder-strewn slopes of granite swept down to the valley, of which we commanded a magnificent view. It seemed narrowed to a mere canyon—each mighty crag, to which from the valley we are wont to look up with reverence, seeming dwarfed as we looked down on its summit. Only the Split Dome remained undwarfed, unrivalled—wonderful!

Returning to the pony and the luncheon-basket, we found creature comforts, which enabled us to face the descent cheerily. Of course, going up a valley in the morning, with the light from the east, gives such totally different effects to descending the same path in the afternoon, with all the lights reversed, that it is like two different expeditions. What most delights you in morning gloom, looks garish in the full glare of sunlight, and *vice versâ*. But to-day, evening and morning were alike grand.

A halt at the inn for a cup of hot tea, and then once more under way, as we had decided to return here that evening. Mr David, with unvarying kindness, went all the way round by the road to lead the pony, leaving the rest of the party free to take the short cut by the river. Anything more wonderful than the beauty of the Diamond



Race in the evening light, I never dreamt of. It is like a river in a fairy tale, all turned to spray—jewelled, glittering spray—rubies, diamonds, and emeralds, all dancing and glancing in the sunlight.

Just below this comes a little reach of the smoothest, clearest water, which seems to calm and collect itself ere gliding over the edge of a great square-hewn mass of granite 400 feet deep, forming the Vernal Falls. Along the summit of this rock there runs a very remarkable natural ledge about four feet in height, so exactly like the stone parapet of a cyclopean rampart that it is scarcely possible to believe it is not artificial. Here you can lean safely within a few feet of the fall, looking straight down the perpendicular crag. But for this ledge, it would be dangerous even to set foot on that smooth, polished rock, which is slippery as ice.

Descending by the long steep flight of wooden steps, we paused to notice a fernery, doubtless tended by the fairies, in the cool shade of a damp grotto, safe beyond reach of thievish human hands.

From the falls being so full, the spray-clouds were so dense that we were thoroughly drenched; but as compensation, we each saw ourselves—not our shadows, but our actual selves—encompassed by a perfect miniature rainbow. I suppose this is the form under which good guardian spirits of the falls reveal themselves to mortals,—and radiant, lovely spirits they assuredly are, though, it must be confessed, somewhat damp!

We really required their aid, for these spray-clouds are



tenfold more bewildering than the densest mist, and I felt quite stupefied while picking my way among the broken fragments of rock at the base of the cliff.

A little farther down we found the pony and its leader —a welcome sight, for even in this exhilarating climate such a day's work is tolerably fatiguing, to say nothing of the exhaustion of seeing so much that is new and beautiful. There still remained the lovely sunset ride down the valley, followed by the heartiest welcome back from our friends here. And then, after dinner, the usual frogs' concert in the moonlight.

CHAPTER X.

EASY LIFE IN THE VALLEY—INDIAN NAMES—MINERS' NAMES —PLANTS AND FLOWERS—HURRIED TRAVELLERS—GOD SAVE THE QUEEN!—SUNDAY SERVICES.

BARNARD'S HOTEL, 22*d May*.

YOU can scarcely realise how strange it feels to go on writing to you, when never an answering word comes back. And I cannot possibly get a letter for a month to come! I see every one else rush to the post-office when the mail-bags are opened; but as I know there can be none for me, I escape that excitement.

After a long spell of fine weather, we have had three real rainy days, greatly to the misery of the tourists. I suppose the rain has accelerated the melting of the snows, for the Yō-semité and Merced, which were in flood a week ago, have now passed all bounds, and the latter has washed away the strong carriage-bridge just above this house. All the flat parts of the valley are under water, so that there are broad mirror-lakes in every direction—and most lovely they are. These, with the temporary



spring falls, add greatly to the beauty of this grand spot, which certainly is the veriest paradise that artist ever dreamt of. No need to go in search of subjects, for they meet you at every turn, and you long for many hands and eyes and minds, to work a dozen sketches at a time!

Here, as I sit in my own cosy little room, I look right down into the clear peaceful river Merced, which here glides along almost imperceptibly, while an upward glance, through a frame of pines and most fragrant poplars, reveals the exquisite Yō-semité Falls, whose waters join the Merced a little below this reach. So at all times and seasons I can watch this most fascinating of shaggy "Grizzly Bears" (such is the meaning of its name)—the ghost of a bear surely, for it is often an ethereal floating thing.

In strong gales the wind carries the whole body of water high in air like a snowstorm or a white dust-storm, and sprinkles the mountain-summits; and at all times the spray flies like clouds of glittering dust, as if the granite walls were powdered by constant friction.

In a direct line the falls are only about a quarter of a mile from here, and sometimes their noise is like the roar of distant thunder; then it comes softened and subdued. It is not quite continuous, but seems to pulsate at short regular intervals—a throbbing sound, as if the waters fell in successive leaps.

Sometimes the music of the waters sounds to me like the tremulous tones of some melodious harp—each vibration of the mighty strings heard separately in everlasting



cadence; at other times, varying with the direction of the breeze, only a low musical murmur reaches me like the humming of a bustling busy bee. Then perhaps a rattle, as if of musketry, suggests the crash of loosened fragments of rock—though the sound is often produced by the mere concussion of air and water. To the same concussion is due the quivering and trembling of the ground, of which you are conscious when standing close to the falls, as though the very earth were overawed by the might of the rushing waters.

Like a true worshipper, I like to keep as much as possible within sight of this vision of beauty; so at meals I always occupy the same corner of the same table, next a window which commands a capital view both of it and of the quiet river. So, although "men may come and men may go," I retain undisputed possession of this pet corner.

I observe that all dwellers in the valley become its faithful worshippers. They speak of it reverently, with a personal love; and, like the Indians, more than half believe in spirits of winds and waters, mountains and forest.

I am not likely to prove an exception, as I have made all my arrangements to stay here for a couple of months longer. Already I feel quite at home in my granite prison, and love its walls and every corner within them, each day revealing new beauties and interests, and of course I have made friends with all the inhabitants.

Mr David remained here three weeks, and proved an invaluable escort—always ready for everything, never con-

fessing to being tired, even when burdened with my heavy sketching-gear, which he sometimes carried for miles over most difficult ground. And then, when I had found the best point to draw from, he would leave me to work, while he explored the tops of a few neighbouring mountains in search of fresh subjects, returning in time to bring me safely back here to dinner. Thanks to this systematic method of exploring, I know my ground fairly well, and can now moon about at my leisure, and work out studies already begun.

To me half the charm of this place is, that though there are now a great number of people in the valley—including some who are very pleasant—there is not the slightest occasion ever to see any one, except at meals; and then only supposing you happen to come in at orthodox hours, which is quite voluntary.

Speaking of meals and accommodation, it is very amusing to hear the comments of some of the rich Americans, whose ideas of hotels are all of palaces, and who had not realised that the end of their journey to the wilderness would land them in so simple a place as this. To me the wonder is, how well so large an influx of visitors is provided for.

Though there is nothing fine, there is always abundance of good wholesome food—beef and mutton, milk and butter, fresh vegetables, and excellent bread—all the produce of the valley; besides all manner of good things imported from the plains—"canned" fruits and so forth. A standing dish is so-called green corn (which is yellow maize

canned in its youth). It is *de règle* here for each person to have a separate little plate for each kind of vegetable, so that each large plate is encircled by a necklace of little ones.

I am told that the pastry is capital; but I eschew it, not liking the Chinese cook's method of preparing it! I know he makes the bread in the same way, but I *have* to forget that! In case you are not "up" in this pleasant topic, I may tell you that a Chinese baker or washerman has one unvarying method of damping his bread or his linen. He keeps a bowl of water beside him, and with his long thin lips draws up a mouthful, which he then spurts forth in a cloud of the finest spray. Having thus damped the surface evenly, and quite to his own satisfaction, he proceeds to roll his pastry or iron his table-cloth to that of all beholders. It does not do in this world to pry too carefully into antecedents. Results are the main point!

Some folk are so prejudiced, that they dislike John Chinaman's method of getting up snowy linen, and are content to pay a far higher price to have their washing done by any other race; so that a family of half-caste Spanish washerwomen who have settled here make a very good thing of it.

Bar this peculiarity, there is much to be said in favour of servants who are always ready, always obliging, at work early and late, and always trig and tidy, their hair as smooth as their calm faces, their clothes spotless.

The servants here are a scratch team of various nations. You would wonder how so few can get through the work,

till you see how much people in this country do for themselves. For instance, to obtain such a superfluity as hot water at bedtime, I must go to the main house, find a candle in one place and a jug in another, and draw for myself from the kitchen boiler. It is all very primitive, but far more to my taste than a "Palace Hotel" would be. You see so much more of life and character.

This morning I sympathetically asked the housemaid, who was rapidly making the beds, whether she didn't find the sudden rush of work rather severe. "Oh no!" she answered. "You see, there is the Italian gentleman, who helps me with the slops!" Every one is "a gentleman" in this country—though, so far as I can judge, it strikes me that the much-vaunted *equality* of all men consists in the inferiors deeming themselves equal to their superiors, who by no means tolerate the assumption!

There are a great many people in the valley now, of all sorts and kinds, but all are in their happiest holiday frame of mind. Good temper must be infectious, for no one ever seems put out about anything, and every one exchanges kindly greetings, in the most easy unstiff manner. Any one who keeps entirely aloof is either set down as an Englishman, or is said to be "putting on frills." My own speech is rapidly becoming seasoned with new phrases. I am convinced that when I come home I shall talk of shot-guns and scatter-guns as distinguished from rifles, and shall call the retrievers "smell-dogs," and ask my friends if they are going out for a day's gunning, or to hunt

grouse? And I know I shall always say "how?" instead of "what?" and bid you "hurry up," and startle you by many other newly acquired expressions: "Why! certainly; you bet!!" But on one point I stand firm: I will never call fireflies "lightning-bugs"! nor bees "sting-bugs"!

One thing I really cannot attain to, is the invariable custom of addressing one another as "Ma'am" and "Sir." I know they think me very ill-bred, but there are limits beyond which assimilation cannot go. I try to excuse myself on the plea that we reserve such honour for royalties, but I doubt if the excuse is considered valid; and yet I have no doubt that this is another instance in which the practice of our great-grandfathers and great-grandmothers has been handed down unchanged to their descendants, and that this is really a relic of the studied courtesies of the last century. But numerous so-called Americanisms are simply old English phrases, which were in common use in the days of Queen Elizabeth: such are "to be mad," in the sense of being angry; "to be sick," as used to describe any illness; and "clever," to describe good-nature.

What we consider the peculiarly American use of the word "guess" is sanctioned by no less authorities than Chaucer, Locke, Milton, Spenser, and Shakespeare. The latter is quoted as the authority not only for the frequent use of "guess" in this sense, but also for that of the much-criticised American expletive "well"—as, for instance, in Richard III., act iv. scene 4, where King Richard replies to Stanley in what we should call pure Yankee phraseology—

"Well, as you guess?"

But strangest of all is it to learn that even the verb to skedaddle is our own by birthright—a heritage from our Scandinavian ancestors. And while Sweden retains the original word *skuddadahl*, and Denmark the kindred *skyededehl*, the milkmaids of Ayrshire and Dumfries still use the word in its old meaning—*e.g.*, "You are *skedaddling* all your milk." The word is to be heard in various other counties, and is even to be found in an old Irish version of the New Testament, which runs thus,—"I will smite the shepherd, and the sheep shall be 'sgedad-ol.'"

In the same way, our American cousins commonly use the old Saxon termination in such words as "gotten" and "waxen," which we only retain in the Bible, or in some of the most primitive of our rural districts—as, for instance, on the Northumbrian coast, where I well remember a fisher-wife greeting me, after an interval of some years, with the exclamation, "Eh! but ye are sair waxen," thereby implying that I was much grown. And in Scotland, "Hae ye gotten ony?" is the popular equivalent for "Have you got any?"

Very strange to English ears is the application of the word "lunch," which here describes any irregular meal, whether eaten at daybreak or at midnight. On our way here we halted for "lunch" at 7 P.M. A man was carving some horribly underdone beef, and asked me whether I liked it "rare." I supposed he meant "raw," but I find that this is the correct term here. On referring to Johnson's Dictionary I find that "rare" does mean "raw," and that "lunch" is defined as "a handful of food"!

But on the other hand, this admirable conservatism does not extend to modern language, and some of our commonest colloquial phrases, here convey a totally different meaning to that which we intend to express, or should wish to utter—a point on which I was warned by an English lady long resident in the country. Thus the ignorant Briton who confesses to fatigue, in the ordinary schoolboy phraseology of "being quite knocked up," can scarcely fail to perceive, by the awkward pause that ensues, and by the scared faces of all within earshot, that this commonly accepted vulgarism, is here considered quite inadmissible.

Then, again, there are various words not recognised by Dr Johnson, which, though in use in the New World as well as in the Old, express wholly different ideas. Thus, the sense of failure conveyed to the ear of an English schoolboy by the expression "having bossed his work," or of a sportsman having made a "boss" shot, would be the last thought suggested in a country where to be "boss" is to be master and superior.

But apart from phrases bordering on slang, many simple adjectives convey very different ideas to what they do in England. Here, to say a person is "homely" is no praise—it implies personal ugliness; while to say he is "ugly" means that he is in a bad temper; and the most hideous woman may be described as "lovely" to express mental charms. Then, again, "cunning" conveys no fox-like sneaking; on the contrary, it is high praise. It may be applied to a pretty bonnet, or any other attractive

object; while to speak of a cunning little child does not even imply the much-esteemed sharpness, but just that it is a winsome child—the very last idea which the word would convey to English ears. And yet our grandparents described skilful workmen as cunning craftsmen.

The same distinction is to be observed with respect to various objects. Thus, supposing you ask for a biscuit, you will be supplied with a hot roll, and will then learn that you should have asked for a cracker. The hungry American who calls for crackers at an English restaurant must feel somewhat aggrieved at being supplied with jocular sugar-plums!

So it is, if you enter a draper's "store" intending to purchase muslins, calicoes, or cottons, you find that each name means one of the others, and the shopkeepers look as if they thought you an ignoramus. Your tailor would likewise be much perplexed should you order a waistcoat instead of calling it a vest, or, *per contra*, "a vest" when you require a flannel waistcoast.

The frequent use of the word "elegant," as applied to such objects as the moon or its light, is also somewhat startling to the unaccustomed ear—especially when preceded by the word "real." Imagine these majestic waterfalls, half revealed by the pale spiritual moonbeams, being described as "real elegant"!

Speaking of loyally adhering to the practice of one's ancestors, I have just had the pleasure of making acquaintance with a New England family who have done so faithfully. We have often noticed the talent possessed by the

great family of Smith for devising distinctive prefixes, from the days of the Diphthong Smiths (the Æsops, the Æneas, the Ægon, the Æthon, and all the other Smiths) onwards. But here my attention was riveted by a prefix altogether new to me—namely, the Preserved Smith.[1]

Feeling convinced that the name must have reference to some event of interest, I took an opportunity of making friends with the mother of the family (a pleasant lady, with pretty silvery hair), and asked her its origin. She told me that about four generations back, a stanch Puritan, of the name of Smith, came out from England with his wife. They had a fearfully tempestuous voyage, and were much knocked about, and in great peril. The exposure and danger to which they were subjected were such as to make it a matter of unusual congratulation when, soon after their landing in New England, a son was born, to whom, in memory of what seemed their almost miraculous preservation, they gave the name of "Preserved"; and this very characteristic title has ever since been transmitted from father to son! The wife and mother of the present owners of the name gave me most interesting accounts of those olden days.

I have several times been very much amused by listening to the general conversation in the public sitting-room or the open verandah. One day recently it turned on the divorce laws of the United States, which certainly

[1] Should these pages ever chance to come under the notice of any member of this family, I am sure they will forgive my quoting this singular and interesting origin of the name they bear.

must rank among the legal curiosities of the world. Each State has its own particular law, quite irrespective of that of its next neighbour. Thus a man who has divorced several wives in succession in one State, and considers himself a gay bachelor, may, on moving into another, be followed by all the wives, and find himself, in American phrase, "very much married"! So diverse are the marriage laws, that, without ever leaving the Eastern States, a couple travelling from north to south (say from Maine to Louisiana, which they might do in thirty hours) would pass through twelve States, in each of which they would be subject to distinct and very different laws.

In some States fourteen separate causes are recognised, any one of which is sufficient ground for divorce. The Tennessee law courts grant a divorce to any man who chooses to settle there, and whose wife objects to accompany him; while in Indiana the power of the judge is practically unlimited, as he can grant a divorce in any case in which he considers the petition "reasonable and proper." But the climax of judicial authority was attained by a judge in Missouri, who brought his domestic troubles for trial at his own bar, and formally sat in judgment on his own suit. Having satisfactorily proved that his wife had been in "the mad dumps silently, for three days," he ruled in his own favour, and pronounced his own divorce to his entire satisfaction!!

May 24th.

After a morning of heavy rain, the sky suddenly brightened, and I joined a party to drive to the Bridal Veil Falls,

at the entrance to the valley. They are now a grand sight; but indeed the whole expedition was beautiful. The atmosphere seemed even clearer than is its wont, the brilliant sunlight casting sharp shadows, and bringing out the rich colouring of the spring verdure. Now all the trees are bursting into leaf; each willow is a misty cloud of delicate young foliage, and the showers of white down from the cotton-wood are wafted by every breath of air, like feathery snow-flakes.

But the green meadows have vanished, and in their place lies a tranquil lake, calm and still, reflecting the clumps of dark pine and oak. The ordinary course of the river is only to be traced by the fringe of alders, willows, and poplars, cotton-wood, and balm of Gilead, which love its banks.

There are waterfalls in all directions. Down every steep ravine they come, flashing in brightness—clouds of white vapour, and rockets that seem to fall from heaven. All the water-nymphs are keeping holiday, and a thousand rainbows tremble on the columns of sparkling spray which flash in and out among the tall pines—such fine spray, that as you pass near, it soaks you unawares. These extempore falls merely flow across the main road in sparkling rills and rivulets; but the regular falls form roaring, foaming torrents, through which, even at the fords, horses have considerable difficulty in passing, and the heavily laden coaches cause their drivers some anxious moments when the waters are rushing with more than their wonted force.

Loveliest of all the temporary falls is that which is now

playing round the summit of El Capitan—an ethereal foam-cloud, which is caught up by the wind, and borne aloft high in mid-air, a filmy veil of the finest mist, white as steam, floating above the grim rock.

On the opposite side of the valley, the so-called Bridal Veil is now a thundering cataract of surging waters, raging tumultuously, and rushing down across the green meadows in a perfect network of streams, all hurrying to pay their tribute to the Merced.

Keeping well to the left of these extempore torrents, we picked our way through the pine-woods, and after a stiff scramble among the fallen rocks at the base of the crags, we reached a point whence we obtained a magnificent view of the falls, shooting past us sideways, which is always the finest aspect of a heavy fall. These rushing waters have an indescribable fascination, which held us riveted—till at last, giddy with their noise and motion, and drenched with spray, we returned on our downward scramble, half envying the streams which leaped so lightly from rock to rock.

Grand as these falls now are in flood, I thought them more graceful when they were less full. Then they really were suggestive of a gossamer veil of light and mist, woven by the fairies for the bride of the Sierras; for never was fall more exquisite than this cloud of tremulous vapour, silently swayed by every breath of air enfolding the rock, sometimes entwining its feet, then tossed aloft as a gauze-like cloud, far above the brink, blending with the white clouds of heaven, the rainbows playing on the spray like

the light from flashing diamonds—a cincture of gems, ever in motion.

So, perhaps, in this instance we may be content to accept the modern name, though the Indians still call it Pohono, "the Spirit of the Evil Wind."

I do think it is a thousand pities that wherever the Anglo-Saxon race settles, it uproots the picturesque and generally descriptive native names of mountains and streams, and in their stead bestows some new name, which at best is commonplace, and too often vulgar.

Happily this majestic valley has fared better in this respect than many humbler districts, though I am sure you will agree with me in thinking that even here many names would have been better left unchanged. For instance, "Pi-wa-ack," which means "the glittering waters," surely better describes a singularly sparkling waterfall than the senseless word "Vernal."

The highest fall in the valley, reckoned at 3300 feet, is called by the Indians Lung-oo-too-koo-ya, which means "long-drawn-out," and exactly describes the very narrow stream which leaps from so great a height. It is also said to mean "the pigeon's creek," and to be descriptive of their plaintive note. But to white men these poetic meanings are alike lost, and replaced by the Ribbon Fall or the Virgin's Tears.

The To-lool-weack, or Rushing Water, is now known as the South Fork, or the Illillouette; while the Yo-wi-ye, or Great Twisted Water—a singularly descriptive name—was changed by some Spanish priest to Nevada, *i.e.* snow.

The Sentinel Rock is still known to the Indian as Loya, the signal station; and the great overhanging rocks which bear the name of Royal Arches, are dear to Indian mothers as To-coy-œ—*i.e.*, the projecting cover which shades the head of the papoose in its basket-cradle.

Tis-sa-ack, called after a beautiful pale spirit whom the Indians believe to have rested thereon, is now only the South Dome—a granite mountain, and nothing more.

The stupendous crag which guards the entrance to the valley, and which is now known as El Capitan, was called by the Indians To-tok-o-nula, in imitation of the wild cries uttered by the to-tok-an, or sandhill-crane, when, flying over the rock, it enters the valley in search of winter quarters. The west side of the crag was called Ajemu (by which name the Indians call the manzanita), this being a spot where they resorted to gather its berries.

The two triple groups of hills towering above the entrance of the valley on the right hand and on the left—formerly Wah-wah-lena and Pom-pom-pasus, or the leaping-frogs—are now the Three Brothers and the Three Graces. Formerly, Mount Watkins was called Wai-you, meaning the Juniper Mountain. The Glacier Point was Pa-tillima. The splintered rock near the Great Fall was Ummo, the lost arrow. A quiet streamlet near was Ollenya—namely, the frog's brook. I am not sure that I regret the substitution of "Cathedral Spires" for "Po-see-nah-chuck-ka," which means "the mouse's acorn-basket"; the new name is in itself strikingly descriptive of the massive pinnacles, and the train of association infinitely preferable.

But it is in the neighbourhood of mining districts that names bestowed by white men convey the least pleasant suggestions. I heard a vast number of these quoted to-day by some gentlemen engaged in superintending mining work, whose wanderings have led them to many a wild settlement, where the diggers have pitched their camps at various times, and then moved off in search of richer fields: needless to remark that such names were generally as rough-and-ready as the nicknames applied to one another.

A pleasantly suggestive name was Hell's Delight; nor were Mad Canyon, Git-up-and-Git, Devil's Basin, Rattlesnake Bar, or Gouge Eye specially attractive. Jackass Gulch, Greaser's Camp, Loafer Hill, Rag-town, Chucklehead Diggings, Greenhorn Canyon, Petticoat Slide, and Shirt-tail Canyon, doubtless each commemorates some rough adventure or coarse jest.

Perhaps Hog's Diggings, Hungry Camp, Last Chance, Love-letter Camp, Poverty Hill, and Graveyard Canyon had stories as intensely pathetic as the 'Luck of Roaring Camp,' and only need a Bret Harte to bring them home to our sympathies.

Coon Hollow, Skunk Gulch, Wildcat Bar, Centipede Hollow, Grizzly Flat, and Wild Goose Flat give a hint of some small sport; while Humbug Canyon, Quack Hill, Gospel Gulch, Gospel Swamp, Piety Hill, and Christian Flat may perhaps record some struggling ray of better things, which all the scoffing and sneers of "Hell's Delight" could not wholly exclude.

I suppose Seventy-Six, Seven-Up Valley, and Seven-by-Nine Valley refer to some gambling transaction, related to Brandy Gulch and Whisky Bar. But there is a savour of comfort in Pancake Ravine and Slap-Jack Bar. Perhaps one of the quaintest of these traces of the gold fever is the name "Tin Cup," which was given to a district so rich in gold that the lucky miners measured their wealth in pint tin-cups!

June 4th.

I am becoming daily more and more enamoured of the valley. The grandeur impresses one more and more every day one stays in it, becoming more familiar with the endless loveliness of all its details. Moreover, I delight in its free and independent life, with abundant comfort and no stiffness; with plenty of kindly folk always ready to be friendly, if one is inclined for society, but who never think of intruding uninvited.

And the valley with its surroundings is so vast that, though there are now fully two hundred white people in it, and about fifty ponies start every morning from the hotels, one may roam about from morning till night and never meet a living soul, except, perhaps, a few tame Indians. I do not think that on all my solitary sketching-days put together, I have seen half-a-dozen white faces; and the Indians do not count for much, as they cannot speak a word of English.

I constantly come down at about five in the morning—sometimes earlier. The waiters know my manners and

customs, so they leave bread and butter and cold meat where I can find them; and as the kitchen-fire seems never to go out, and the coffee is always on the boil, whether John Chinaman is at his post or not, I forage for myself, and after a comfortable breakfast, prepare my luncheon, shoulder my sketching-gear, and start for the day, with the delightful conviction that I can work or be idle, as inclination prompts, from dawn till sunset, unmolested.

Early rising here is really no exertion, and it brings its own reward, for there is an indescribable charm in the early gloaming as it steals over the Sierras—a freshness and an exquisite purity of atmosphere which thrills through one's being like a breath of the life celestial.

If you would enjoy it to perfection, you must steal out alone ere the glory of the starlight has paled,—as I did this morning, following a devious pathway between thickets of azalea, whose heavenly fragrance perfumed the valley. Then, ascending a steep track through the pine-forest, I reached a bald grey crag, commanding a glorious view of the valley, and of some of the high peaks beyond. And thence I watched the coming of the dawn.

A pale daffodil light crept upward, and the stars faded from heaven. Then the great ghostly granite domes changed from deep purple to a cold dead white, and the far-distant snow-capped peaks stood out in glittering light, while silvery-grey mists floated upward from the canyons, as if awakening from their sleep. Here, just as in our own Highlands, a faint chill breath of some cold current

invariably heralds the daybreak, and the tremulous leaves quiver, and whisper a greeting to the dawn.

Suddenly a faint flush of rosy light just tinged the highest snow-peaks, and, gradually stealing downward, overspread range beyond range; another moment, and the granite domes and the great Rock Sentinel alike blazed in the fiery glow, which deepened in colour till all the higher crags seemed aflame, while the valley still lay shrouded in purple gloom, and a great and solemn stillness brooded over all.

I spent most of the day at that grand watch-post, till the purple clouds, gathering on every side, warned me of an approaching storm, when I hurried down, and (wading knee-deep across a flooded rivulet) reached a cattle-shed just in time to get into its shelter, when a tremendous thunderstorm burst right overhead, followed by a rattling hailstorm, each hailstone the size of a large pea. Then the sky cleared, and the evening was radiant as the morning.

In the month that I have already spent here, I have watched the magic change from winter to summer—from melting snows to sheets of flowers—and the fields of wild strawberries have gone a step further, and have changed from blossom to berry. I have watched the chaparral—*i.e.*, flowery brushwood—which clothes the base of the crags, change from wintry undress to the richest summer beauty. First came a veil of freshest spring-green, and now a wealth of delicate blossoms perfumes the whole air.

There is the Californian lilac, here called "The Beauty

of the Sierras,"[1] which bears thick brush-like clusters of fragrant pale-blue blossom, consisting chiefly of stamens, with very little calyx. Then there is the Buck-eye or California chestnut,[2] and the Blackthorn, and the silvery-leaved manzanita,[3] which is a kind of arbutus (akin, I suppose, to the madroña of the Coast Range).

This bears waxy pink bells, and is the most characteristic shrub of California. It is a small shrub, but mighty in strength, for it works its way through cracks and crevices, and splits the solid rock as silently but as effectually as does the frost. On the bleakest exposures, where soil is scantiest, there above all it flourishes; and its smooth, rich maroon-coloured bark gives a point of warm colour to the cold grey cliffs. Walking-sticks made of its curiously twisted ruddy branches find great favour with travellers as mementoes of the valley.

It seemed like a dream of English shrubberies when, in many a sunny nook, I came on banks of crimson ribes, and white bird-cherry, and day by day watched them first bud, and then burst into bloom.

One shrub new to me is the dogwood,[4]—a small tree, literally covered with starry blossoms like large scentless roses, snow-white, and about three inches in diameter. But far above all, in this realm of delight, I have watched the dense thickets of azalea all along the river, and at the base of the crags, transform themselves from leafless sticks into sheets of fragrant yellow blossom—the most heavenly

[1] *Ceanothus.*
[2] *Æsculus Californica.*
[3] *Arctostaphylos glauca.*
[4] *Cornus Nuttallii.*

of all delicate perfumes. A sunny corner among the mossy rocks, in an azalea thicket, is a foretaste of Paradise!

Then wherever you turn, in the meadows or the canyons, there has sprung up a carpet of flowers of every hue, in amazing profusion. It is as if all the glory of which I had a glimpse in Easter-week on the seaboard had been transferred to this upper world, where every valley is now flower-strewn. Sweet wild-roses, blue and yellow lupines, scarlet columbine and painter's brush, blue nemophila, purple-spotted nemophila, blue larkspur, scarlet lychnis, yellow eschscholtzia, scarlet and blue pentstemon, golden rod, Mariposa lilies, fritillaria, heart's-ease, dandelion, blue gentian, bluebells, phloxes, white ranunculus, yellow mimulus, marigold, and many another lovely blossom, each add their mite of gay colouring to the perfect scene, like threads in some rich tapestry.

Every evening I carry home a handful of the loveliest, to adorn my special table in the dining-room, at which the excellent landlord takes care always to place such new arrivals as he thinks likely to prove most agreeable to me. And I am bound to say he has provided a succession of very pleasant companions—some from England, some from the Eastern States. And there is no denying that after a long day alone with the bees and the squirrels, it is cheery to find nice neighbours at dinner.

June 14th.

Of course every one who comes here is on the travel. They have either been exploring South or Central America

or New Zealand, or they have just arrived from India, China, and Japan, or from the Eastern United States. The latter seem to consider a journey here, a far more serious undertaking than a tour over the whole continent of Europe. Two gentlemen arrived here straight from Fiji, bringing me the latest news of all my friends there.[1]

Altogether this strange chasm in the mighty mass of granite mountains is really quite a large little world. Heads of department—legal, military, and medical, from various British colonies—stray members of foreign embassies, Oxford and Cambridge men on vacation tours, ecclesiastical authorities of all denominations, mighty hunters, actors, artists, farmers, miners, men who have lived through California's stormy days, when derringers and revolvers were the lawgivers,—these are but a sample of the mixed multitude who meet here with one object in common, and who, one and all, confess that their expectations are surpassed.

I know of no other "sight"—save the Taj Mahal—which so invariably exceeds the fancy-pictures of its pilgrims.

The worst of it is, that the majority of "*bonâ fide* travellers," ignorant of the country, arrive here, having made their irrevocable plans, by the advice of coach-agents, on certain cut-and-dry calculations of time, which generally assume that three days in the valley is ample allowance. So they spend their three days rushing from point to

[1] A third gentleman from Fiji arrived a few days later.

point, missing half the finest scenes, and then resume their dust-coats, and rattle away again, with a general impression of fuss and exhaustion.[1]

Some of these travellers have so recently left England that they bring me much welcome home-news; for some prove to be old acquaintances, and others are friends' friends, a title which (however little it may mean in England) is a great reality in far countries. So you can perhaps understand with what true interest I look at the Hotel Register every evening to see who may have arrived by the three daily coaches.

Very different coaches, by the way, to the extremely uncomfortable one in which we jolted all the way here in the early spring. Now, the roads are in good order, and large luxurious open coaches rattle over the ground. I am bound to say, however, that this season has one terrible disadvantage in the clouds of dust. The wretched travellers arrive half suffocated, and looking very much as if they had walked out of flour-bags; but the flour is finely sifted granite-dust, most cutting to the eyes.

As the coach draws up, out rush the waiters and other attendants armed with feather-brushes, which they apply vigorously to the heads of the new-comers, and then help

[1] A most aggravating instance of such miscalculation was that of two English gentlemen who arrived a few days later, and, being bound to catch a particular steamer at San Francisco, discovered, on reaching the valley, that they had exactly two hours to remain in it, and must start by the afternoon coach. Like true Britons, they devoted their short visit to a refreshing bathe in the ice-cold waters of the Merced, followed by a hasty luncheon, and then bade a regretful farewell to the scenes they would so fain have explored at leisure.

to pull off their large dust-coats—most necessary garments in this country.

I notice with interest and curiosity the number of ladies, both English and American, who find their way here. In all my previous wanderings (in India, Ceylon, New Zealand, Australia, and the other South Pacific Isles, extending over a period of eight years) I have only met one woman travelling absolutely for pleasure. Here there are many—amongst whom I am especially attracted by a very nice, gentle, little old lady, who, at the age of sixty-eight, has taken a craving to see the world before she dies; and although her means are so restricted that she has to study economy at every turn, she is exploring the earth in the most systematic and plucky manner, like a second Ida Pfeiffer.

Among our most attractive inmates is a very *piquante* little French lady, who warbles like a nightingale, and sings us *ravissantes* little French ballads, as we sit out in the moonlight or starlight, beside the river, among the fragrant azaleas.

But the most interesting of my new acquaintances is a very handsome young American doctor, to whom I honestly confess I should lose my heart were I a young patient! A good linguist, a good musician, clever and intellectual. So good-looking and attractive a doctor should act as a charm on the sufferers.

The most curious thing about it is, that my doctor wears the most dainty little feminine garments, and first attracted my attention by the charm of a pensive Ma-

donna-like beauty. In short, *she* is a handsome, well-educated American girl, travelling with her parents, who are pleasant as herself.

Judge of my astonishment when she told me that she hoped I would look her up . . . at the medical college in Philadelphia! I then learned that she had recently graduated at Vassa College, and hopes very soon to start in regular practice, in which she tells me many women are now making their ten or fifteen thousand a-year (dollars, not pounds). This is indeed a case of "sweet girl graduates"! You see, I have been living among savages, so am not up to the progress of the age. To hear my pretty friend talking familiarly of Professor This or That (all women), and of its being a relic of barbarism for women to be attended by male doctors, was to me really quite a curiosity.[1]

For a few days there was rather a noisy invasion—a large family party from Southern California, overflowing with exuberant life, which could not be quelled even by the toilsome ascent of every high point, but had to find

[1] Still stranger did it seem to me to hear of the women lawyers in America. It appears that the Supreme Court of Massachusetts having decided that only men were entitled to practise in the courts of that State, the Legislature is to be appealed to, and a bill has been introduced to admit women on equal terms with men. It may be added that they are so admitted already in Illinois, Iowa, Kansas, Maine, Michigan, Minnesota, North Carolina, Ohio, and Wisconsin. Further, by an Act of Congress passed in 1879, those women who have been for three years members of the bar of the highest court of any State or territory, or of the Supreme Court of the District of Columbia, may be admitted to practise in the United States Supreme Court.

vent in the evenings by riotous infantile games, in which all around were urged to join. One evening they sang prettily in chorus. Suddenly my patriotic soul was thrilled by the sound of "God save the Queen!" (which I have only heard once in the last two years, played by the French band at Tahiti)—so I drew near to listen, and heard unknown words. Wondering, I asked what they were singing. They looked amazed at such ignorance, and answered—

"My country, 'tis of thee,
Sweet Land of Liberty!"

On my being unable to refrain from a slight expression not altogether sympathetic, my informant added, "Well, I reckon we've as good a right to sing American words to 'God save the Queen!' as you Britons have to call our Sequoias Wellingtonias!"—which was just, if not generous.

This storming-party held the valley for a week, and then departed, saying they had had "a real good time"!

Happily most folk seem rather hushed by the solemn beauty of the place, and the awful stillness of the mountains. Boisterous merriment seems as much out of place as it would be in a grand cathedral—indeed there are few who do not unconsciously shrink from loud mirth as almost irreverent.

On several Sundays we have had very interesting services held in a large room[1] by representatives of sundry

[1] The valley now possesses a real church.

and divers denominations. Curiously enough, the first was conducted by the Rev. George Müller, of the Bristol Orphanage, whose name is so familiar to English ears. On Whitsunday the valley was found to contain parsons of all manner of sects; so they agreed to hold a joint service in the "Cosmopolitan Hall," where Congregationalists, Presbyterians, and a Unitarian minister gave addresses by turns, interspersed with exceedingly pretty part-singing in the Moody and Sankey style, most of the congregation being apparently trained singers. I doubt whether a similar promiscuous gathering in England could produce as pleasant music. It struck me that this good hymn-singing seemed a great promoter of harmony among these preachers of divers creeds.

Of course the natural loveliness of this rock-girt shrine affords ample material for illustration, and the texts which naturally suggest themselves are those which draw their imagery from the mountains. "As the hills stand about Jerusalem, so standeth the Lord round about His people." "The strength of the hills is His." "The earth is full of His praise." "The Lord shall rejoice in His works. He clave the hard rocks in the wilderness; He brought waters out of the stony rock." "Thou didst cleave the earth with rivers; the mountains saw Thee and they trembled; the overflowing of the water passed by." "His voice is as the sound of many waters." "Strength and beauty are in His sanctuary."

Such words as these seem fitting as we look up to the sheer granite cliffs and massive rock-towers gleaming in

dazzling brightness against the azure sky, and the water-floods pouring down in snow-white cataracts.

I have been much struck with the extreme fluency of most of the speakers, and am told it is an ordinary characteristic of the American clergy—a very pleasant one for their hearers, who, however, do not seem far ahead of ourselves in practising the precepts so ably taught. One of our parsons remarked that preaching the Gospel to some folk was like pouring water over a sponge, which drank it in and retained it; but to others it was like the wind blowing through a hen-coop,—and his experience of preaching led him to believe that his congregations numbered many hen-coops, but few sponges!

CHAPTER XI.

A GENERAL SKETCH OF THE MOUNTAIN-RANGES OF CALIFORNIA.

June 15th.

FOR some time I have been feeling so puzzled while attempting to follow the discussions of various travellers (as they gather at night round the blazing wood-fire in the Big-Tree room), that this morning I determined to give myself a geological-geography lesson; so, armed with Professor Whitney's 'Notes on the Geology of California,' I sallied forth in search of a quiet nook wherein to study them undisturbed. I found a retreat fit for any sage, in a natural hermitage, formed by a huge granite-boulder resting on two others, some way up the hill. It is carpeted with greenest grass, gay with flowers, and the overhanging oaks make a frame through which the distant fall appears like a shadowy spirit.

There I sat, till I had taken in some of the main points, and their bearing on the various statements I have recently heard; and now, as I daresay you know no more on the

subject than I did, I shall give you an outline of my newly acquired knowledge, hoping thereby to impress it on my own memory!

First, then, I must remind you how, in our early school-room days, we were taught to call the great mountain-ranges of Western America "The Cordilleras," which was the name given by the Spanish settlers to describe the many chains of mountains which trend north and south from Patagonia to British America, forming the sinews of the vast continent. In South America, these mountain cords were defined as Cordilleras of the Andes, that grand simple range usurping the supremacy beyond all question.

But the Cordilleras of North America comprise a great number of ranges, intricate as the cordage of a ship. Nearest to the shores of the Pacific lies the Coast Range, which is composed of a multitude of subordinate ranges, most of which bear the name of some Christian saint, bestowed on them by the early Spanish-Mexican settlers. This region is described as a sea with "innumerable waves of mountains and wavelets of spurs."

It is a comparatively low range, its highest points not exceeding 8000 feet, while those near San Francisco are only about half that height. Mount Hamilton, the highest point visible from San Francisco, is 4440 feet high. The charm of the range consists chiefly in the beauty of its slopes and fertile valleys, and of their rich vegetation, including the magnificent forests of redwood cedar, which belongs exclusively to the Coast Range.

The southern part of the range must, from all accounts,

be a pleasant region in which to make a home. Its park-like slopes are dotted with splendid evergreen oaks, its soil is productive, and its climate delightful. It has no winter. Six months of delightful spring are followed by a long summer of unvarying brilliancy; but the blazing sun is tempered by sweet sea-breezes (not always free from fog, I suspect). In summer the land becomes burnt up and yellow, but in the spring its fresh beauty is unsurpassable.

The northern part of the range is less favoured. In winter, snow generally lies for some days, and occasionally for weeks. Part of the range is described as "the chaparral waste," being made up of a wilderness of ridges all so densely covered with chaparral, that even sportsmen shrink from attempting to penetrate it. I should mention that chaparral is the name here given to dense brushwood, made up of low shrubs, such as the scrub-oak, with its cruel thorns, and the still more dreaded poison-oak. You can imagine that such thickets are not inviting!

The next "cord" is the mighty Snowy Range. It is separated from the Coast Range by the Great Valley—*i.e.*, the Sacramento and San Joaquin valleys, which run north and south for a distance of about 500 miles. At either end the two ranges meet and blend in a perfect labyrinth of ridges, and form innumerable deep valleys and ravines, most bewildering to the explorer.

The Sierras are, as it were, strands in the mightiest of the Cordilleras. The name applies to the western belt (about 80 miles wide) of a vast wilderness of mountain-

chains built up in intricate ridges on the great plateau, 1000 miles in width, which forms the watershed of the continent.

The Sierras trend north and south through the States of Washington, Oregon, California, and Mexico. The great plateau includes Oregon, Idaho, Nevada, Utah, and Arizona.

The parallel mountain-chain on the eastern edge of the plateau is known as the Rocky Mountains. It is a belt 700 miles in width, and trends through the States of Montana, Idaho, Wyoming, Colorado, and New Mexico.

As compared with the Sierra Nevada, the Rocky Mountains lose much of their dignity, from the fact that they rise from a base 6000 feet above the sea-level; and this high pedestal is reached by an almost imperceptible ascent, the prairie sloping gently upwards all the way from the Mississippi, a distance of 600 miles. So, although the mountain-summits do rise to 12,000 and 14,000 feet, half their apparent height is lost—as it were, buried—in this deep deposit.

The Sierras, on the other hand, are within a hundred miles of the seaboard, and rise at a far more abrupt gradient, thereby gaining vastly in apparent height.

But if the Rocky Mountains summits fail to impress a full sense of their true height, there is one respect in which they stand pre-eminent—namely, in the stupendous canyons which seam them in every direction,—gigantic ghastly chasms, the existence of which is attributed to the ceaseless rushing of mountain torrents, wearing for themselves ever-deepening channels.

These gruesome gorges wind about, apparently in the very bowels of the earth, and the bold explorer who tries to follow the course of the waters, looks up two perpendicular rock-walls, several thousand feet in height, to a narrow strip of sky far, far overhead, well knowing how hopeless would be any attempt to reach the upper earth. Fearful and thrilling have been the adventures of prospectors, who, in their determination to find the mountain's hidden treasures of gold and silver, have dared to face every danger that could be combined—hostile Indians, hostile nature, and most appalling hardships.

Undoubtedly the thirst for gold has done good service to geographical research in the vast barren tracts of mountainous country. In themselves most uninviting, they offer such possibilities of mineral wealth as induce a large number of adventurous men (to whom danger and hardships are as second nature) to undertake the most perilous journeys in order to explore the inhospitable desert and hungry regions of these Western wilds.

These men have traversed every mountain and valley, and have examined the soil of every creek and gully, and the sand of every river, in the most inaccessible regions; and there are few who could not, if they chose, tell of hairbreadth adventures and deeds of daring. Some have been left sole survivors of their party, escaping from wild Indians to find themselves lost in awful canyons and chasms, from which escape seemed impossible, and where starvation stared them in the face.

Yet by some means or other, and by the exercise of

almost superhuman endurance, they have found their way back to the haunts of white men, and have added their hardly earned knowledge to that of a multitude of other explorers; and so, little by little, the nature of the country has come to be pretty well defined.

Probably the greatest chasm in the known world is the Grand Canyon of the Colorado river (the Rio Colorado Grande), which is a gorge upwards of 200 miles in length, and of tremendous depth. Throughout this distance its vertical crags measure from *one* to upwards of *six thousand feet* in depth! Think of it! The highest mountain in Scotland measures 4418 feet. The height of Niagara is 145 feet. And here is a narrow tortuous pass where the river has eaten its way to a depth of 6200 feet between vertical granite crags!

Throughout this canyon there is no cascade; and though the river descends 16,000 feet within a very short distance, forming rushing rapids, it is nevertheless possible to descend it by a raft—and this has actually been done, in defiance of the most appalling dangers and hardships. It is such a perilous adventure as to be deemed worthy of note even in this country, where every prospector carries his life in his hand, and to whom danger is the seasoning of daily life, which, without it, would appear positively monotonous.

I suppose no river in the world passes through scenery so extraordinary as does the Colorado river, in its journey of 2000 miles from its birthplace in the Rocky Mountains, till, traversing the burning plains of New Mexico, it ends

its course in the Gulf of California. Its early career is uneventful. In its youth it bears a maiden name, and, as the Green river, wends its way joyously through the upper forests. Then it reaches that ghastly country known as the *mauvaises terres* of Utah and Arizona—a vast region (extending also into Nevada and Wyoming), which, by the ceaseless action of water, has been carved into an intricate labyrinth of deep gloomy canyons.

For a distance of *one thousand miles* the river winds its tortuous course through these stupendous granite gorges, receiving the waters of many tributary streams, each rushing along similar deeply hewn channels.

In all the range of fiction no adventures can be devised more terrible than those which have actually befallen gold-seekers and hunters who, from any cause, have strayed into this dreary and awesome region. It was first discovered by two bold explorers, by name Strobe and White, who, being attacked by Indians, took refuge in the canyons. Preferring to face unknown dangers to certain death at the hands of the enemy, they managed to collect enough timber to construct a rude raft, and determined to attempt the descent.

Once embarked on that awful journey, there was no returning—they must endure to the bitter end.

On the fourth day the raft was upset. Strobe was drowned, and the little store of provisions and ammunition was lost. White contrived to right the raft, and for ten days the rushing waters bore him down the frightful chasm, seeing only the perpendicular cliffs on either side,

and the strip of sky far overhead—never knowing, from hour to hour, but that at the next winding of the canyon the stream might overleap some mighty precipice, and so end his long anguish. During those awful ten days of famine, a few leaves and seed-pods, clutched from the bushes on the rocks, were his only food.

At length he reached a wretched settlement of half-bred Mexicans, who, deeming his escape miraculous, fed him; and eventually he reached the homes of white men, who looked on him (as well they might) as on one returned from the grave. The life thus wonderfully saved was, however, sacrificed a few months later, when he fell into the hands of his old Indian foes.

The story of White's adventure was confirmed by various trappers and prospectors, who, from time to time, ventured some little way into this mysterious rock-labyrinth; and it was determined to attempt a Government survey of the region. Accordingly, in 1869, a party, commanded by Major J. W. Powell, started on this most interesting but dangerous expedition. Warned by the fate of a party who attempted to explore the country in 1855, and who, with the exception of two men (Ashley and another), all perished miserably, the Government party started with all possible precautions.

Four light Chicago-built boats were provisioned for six months, and, with infinite difficulty, were transported 1500 miles across the desert. On reaching their starting-point, they were lowered into the awful ravines, from which it was, to say the least, problematic whether all

would emerge alive. The dangers, great enough in reality, had been magnified by rumour. It was reported, with every semblance of probability, that the river formed terrible whirlpools—that it flowed underground for hundreds of miles, and emerged only to fall in mighty cataracts and appalling rapids. Even the friendly Indians entreated the explorers not to attempt so rash an enterprise, assuring them that none who embarked on that stream would escape alive.

But in the face of all such counsel, the expedition started, and for upwards of three months the party travelled, one may almost say, in the bowels of the earth—at least in her deepest furrows—through canyons where the cliffs rise, sheer from the water, to a height of three quarters of a mile!

They found, as was only natural, that imagination had exaggerated the horrors of the situation, and that it was possible to follow the rock-girt course of the Colorado through all its wanderings—not without danger, of course. In many places the boats had to be carried. One was totally wrecked and its cargo lost, and the others came to partial grief, entailing the loss of valuable instruments, and almost more precious provisions. Though no subterranean passage was discovered, nor any actual waterfall, there were nevertheless such dangerous rapids as to necessitate frequent troublesome portage; and, altogether, the expedition had its full share of adventure.

The ground was found to vary considerably. In some places the rock is so vivid in colour—red and orange—

that the canyons were distinguished as the Red Canyon and the Flaming Gorge. Some are mere fissures of tremendous depth; while in other places, where the water has carved its way more freely, they are broad, here and there expanding into a fertile oasis, where green turf and lovely groves are enclosed by stupendous crags—miniature Yō-semités — which to these travellers appeared to be indeed visions of Paradise.

I do not hear of any canyons of this description in the Sierra Nevada—a name which is generally applied to the whole range, extending from Tejon Pass in Southern California, to Mount Shasta in the north, a distance of about 550 miles. Some geologists, however, do not admit the use of the term farther north than Lassen's Peak, which is a grand volcanic snow-capped mountain, beyond which a great volcanic plateau stretches to the north.

On this grand base is built up Mount Shasta, which is the Californian counterpart of Fuji-yama, the Holy Mountain of Japan, and, like it, is a perfect volcanic peak, standing alone in its colossal might, and sweeping upwards from the plain in unbroken lines of faultless beauty, to a height of 14,444 feet. There are few days in the year when this glorious mountain is to be seen without its snowy robes, or at least a snow crown. Hence the name by which it is known to the Indians — the White Pure Mountain.

As a volcano, it has long lain dormant; but there are boiling sulphureous springs within a few feet of the summit crater, while jets of steam and sulphur-fumes rise from

many a fissure, and have proved the salvation of rash mountaineers who have been storm-stayed and benighted on the freezing summit. Below these symptoms of hidden fire, and the cone of loose volcanic ash, lie ice-fields and living glaciers.

Three distinct glaciers are accessible, from one of which, on the eastern slope of the mountain, flows a stream known as Mud Creek, which shortly disappears in the earth; and though the thirsty traveller is tantalised by the murmur of snow-fed waters gurgling beneath and between the loose rocks, he may march right round the cone—a circuit of 100 miles—without finding a spring or crossing a stream.

Whether that glacier stream really deserves such a name as Mud Creek, I cannot fathom; but in its next appearance it bursts from the ground in a great volume of water, clear as crystal and cold as ice, and rushes seaward at the rate of twenty miles an hour, between the rocky walls of a deep canyon. In this second stage of its existence it is known as the M'Leod river, or—sometimes far more poetically—the M'Cloud,[1]—a worthy name for the stream, which, like its godmother, is a true

> "Daughter of earth and water,
> And nursling of the skies."

It is a stream abounding in trout and salmon, the former sometimes weighing as much as three pounds. A red-spotted trout, known as "Dolly Varden," which is found only in

[1] Child of a cloud.

glacial streams, is also abundant, and runs from one to twelve pounds. I hear sportsmen speaking of this region as of a most happy hunting-ground. Deer are abundant; so are elk and antelope; also cinnamon, brown, and black bears, but no grizzlies. The absence of the latter does not appear to be a matter of deep regret, as they are ugly customers. Mountain quail and Californian grouse abound; and to the north of Mount Shasta, in Oregon, mountain sheep are found, and an occasional puma, or Californian lion; also wild-cats and lynx.

There are two men now in the valley who were shooting near Mount Shasta last year, and are especially enthusiastic on the subject of stalking mountain sheep,[1] which they describe as most graceful, active creatures, about double the size of an average domestic sheep, and clothed in a greatcoat of straight, glossy, dark-grey hair, covering the under coating of soft, fleecy, white wool. In general form they resemble strongly built, shapely deer, having only the head and horns of sheep. Both the ewe and the ram have horns—the former of modest dimensions, the latter very large and handsome, increasing in size to the age of eight years. A good head may measure two and a half feet across the horns, each of which might measure three feet, following the grand simple curve, and about sixteen inches in circumference at the base.

These Big-horns, as they are called, are brave, fearless creatures, wonderfully agile and sure-footed. They contrive to scale the smoothest glacier-polished granite

[1] *Caprovis Canadensis.*

domes (where an experienced cragsman can scarcely make his way), by means of a series of little stiff skips. They never miss their footing, never slip or slide, nature having furnished them with a very elastic hoof, furnished at the back with a soft springy pad, acting in some measure like the sucker-foot which enables flies to walk on glass.

Thus provided, the mountain sheep roam in glad freedom among inaccessible crags, where the frozen snow lies chill on the high wind-swept ranges, from ten to thirteen thousand feet above the sea-level; and here the mountain lambs begin their hardy lives in grim cradles of rock and snow, far above the eyries of the mountain eagles. The mother ewe selects a spot somewhat sheltered from the chilling winds, but commanding such an outlook as to guard against possible surprise; and here she scrapes herself a bed of crumbling granite, and gives birth to her lamb, which soon grows strong and fearless, and lives a joyous life in the high pastures, starred with daisies and blue gentians.

Sheep-stalking in these regions is apparently its own reward—a pleasure quite apart from the bloodthirsty or covetous instinct of shooting a creature because it is rare, or wild, or beautiful. But whether animate or inanimate nature be the attraction, every one who has visited that district speaks of it with rapture as a region of beauty and delight. The mountain rises from a magnificent belt of forest, which clothes its slopes to a height of about 10,000 feet, where it meets the snow-line. Travellers ascending

the mountain, spend at least one night camping in the upper forest. They say the view from the summit is magnificent, taking in a radius of nearly 500 miles—a circle including the whole of Northern California, from the Coast Range to the Sierras, and also a considerable part of Oregon.

The region abounds in mineral springs, differing chiefly in their degrees of unsavouriness. Some are strongly effervescent, and contain iron, salts, and soda. People who are not intent on climbing the mountain to obtain a widely extended view, generally prefer the autumn, when the atmosphere is invariably clouded by smoke of burning grass or forest. They tell me it is easy of access, and that there are very comfortable hotels. So I think some day I shall make tracks for Mount Shasta, which from all accounts must, I think, unquestionably be the loveliest mountain in California.

It forms a grand junction for the Sierras and the Coast Range, which there combine, and merge in one great ridge known as the Cascade Range, which trends northward through Oregon and Washington, gradually losing level, till it sinks into comparatively low spurs. It is a purely igneous region, and from Mount Shasta right up to Pugin Sound, a series of great volcanic cones tower many thousand feet above the basaltic beds from which they spring. In short, this crest of the Sierras was a vast volcanic chain, of whose former activity proof still remains in the immense area covered with lava—an area which geologists estimate at 20,000 square miles.

Respecting the work of fire and frost in these regions, Mr Whitney states that, although the central mass of the Sierra Nevada consists chiefly of granite, "it is flanked on both sides by metamorphic slates, and capped irregularly by vast masses of basaltic and other kinds of lava, with heavy beds of ashes and breccia, bearing witness to a former prodigious activity of the subterranean volcanic forces, now dormant." The existence of a number of hot springs, and an occasional earthquake, alone survive to tell of the slumbering fires. I am told that in 1872 so violent an earthquake shock was experienced here, that it shook the whole valley—all the clocks stopped, and it is said that even the mighty El Capitan rocked like a cradle.

The largest amount of volcanic material is found to the north, where it covers the whole of the range, forming one vast plateau, crowned with many cones, with clearly defined craters. Mr Whitney recommends the summit of Mount Hoffmann as an excellent point whence to obtain a good view of the almost inaccessible volcanic region lying between the Tuolumne river and the Sonora trail, where great lava-beds, in some places 700 feet thick, rest on the granite at an elevation of 3000 feet above the valley, the dark lava-flow showing conspicuously in contrast with the dazzingly white granitic masses.

One of the most remarkable mountains in that district has been named Tower Peak. It rises in steps like a series of truncated pyramids piled one above the other; and Whitney declares it to be one of the grandest mountain-masses in California.

He recommends the ascent of Mount Dana as being very easy, and affording an admirable bird's-eye view of the principal geological features of the Sierras. Mount Dana itself is a mass of slate, part of which lies in bands of bright green and reddish-brown, forming a mass of rich colour pleasant to the eye, which has been wearied by the continuous panorama of cold grey or white granite. This belt of metamorphic rock extends a long way to the north, giving a rounded outline to the summits (some of which are upwards of 13,000 feet in height) in striking contrast with the jagged peaks which chiefly distinguish the granite belt.

The latter gradually widens as it passes through Southern California, where it has a breadth of about forty miles. This is the highest part of the Sierras, some of its peaks being about 15,000 feet in height. Here lie the chief traces of the Frost King, in highly polished granite slabs, and the moraines deposited in all the valleys. On Mount Dana, also, the traces of ancient glaciers are distinctly visible at a height of 12,000 feet; and, in the gap south of the summit, there is evidence of a mass of ice fully 800 feet thick having lodged for many a long year—a chilling guest!

While each gorge and canyon had its own special ice-stream, a giant glacier appears to have passed by Mount Dana, and filled the great Tuolumne valley to a depth of fully 1000 feet—that is to say, 500 feet higher than the pass which lies between the Tuolumne river and the Tenaya lake.

By this pass the ice-lake overflowed into the Tenaya valley, where the ridges are so worn and polished by its action, that they afford slippery footing, and horses and men slide pitifully as they pick their way over the broad smooth slabs of rounded granite. At the head of Lake Tenaya there is a conical knob of granite 800 feet high, so smoothly polished by glaciers, that not a blade of grass finds a crevice in which to nestle.

While the overflow thus left its mark for all time in the Tenaya, the great glacier passed on its slow, silent way down the Tuolumne valley—an ice-river 1000 feet deep, and a mile and a half in width. Everywhere the rocks bear witness to its passage. They are grooved, and scratched, and scored by the grinding of the gravel and the rocks, crushed beneath that ponderous weight; while at other points, long parallel lines of *débris* lie just where the melting of their ice-carriage left them.

Professor Whitney says that this region of the Upper Tuolumne is one of the finest in the State for the study of traces of the ancient glacial system of the Sierra Nevada.

He tells how, at that part of the valley called Grand Canyon, the whole surface of the rocks, for a distance of about eighteen miles, is all glacier-polished. Just at the head of the canyon he found an isolated granite knob, rising to the height of about 800 feet above the river, beautifully polished to its very summit; and on climbing this, he obtained a wonderful view of the valley. Below him lay outspread smooth, glittering surfaces of granite, telling of a far-distant past; while above the steep pine-

clothed slopes lay the great dazzling snow-fields, crowned by the Unicorn Peak and a multitude of nameless spires.

Farther up the valley he had found a granite belt, worn into many knobs, some of them about 100 feet in height, and separated by great grooves and channels worn by ice. But in general, he is chiefly struck by seeing how little effect the ice has had in shaping the land. The rough-hewing has been the work of fire and other agents, while frost has done its part chiefly in rounding and polishing the pre-existing forms.

Descending the Tuolumne canyon till he reached the beautiful Hetch Hetchy valley, he there found clear proof that the great glacier had passed through it, the rocks being all ice-grooved to a height of 800 feet above the river, while a moraine was observed fully 400 feet higher.

This has a special interest, from the fact that, in the Great Yō-semité Valley, no trace of such glacial action has been found. Apparently the magnificent amphitheatre of high mountains which formed the cradle of the Tuolumne glacier favoured the formation of so vast a body of ice, that it descended far below the line of perpetual snow ere it melted away.

On the other hand, the plateau whence springs the Merced river did not allow of the formation of a glacier sufficiently massive to reach the Yō-semité Valley, so that its course can only be traced to the Little Yō-semité above the Nevada Falls, and to the spur at the head of the valley. There it seems to have melted away; and only the quaintly perched blocks, poised on the rounded

granite slabs, tell of the chill ice-river that flowed thus far and perished.

I fear these geological details may sound to you very dry, but to any one on the spot they are intensely interesting. I sometimes sit for hours on some high point overlooking the distant ranges, trying to picture the scene in remotest ages, when the Fire King was forging these mighty ribs of the earth, or when the Frost Giants held it frozen in their icy grasp.

With respect to geological periods, as in most other matters, I am inclined to think that "there is no time like the present"!

CHAPTER XII.

HOME LETTERS—CALIFORNIAN POSTS TWENTY YEARS AGO—HAPPY DAYS IN THE VALLEY—THE NOBLE SAVAGE—CAMPERS—RATTLESNAKES—NATIONAL PARKS.

June 24, 1878.

DEAREST NELL,—At long last my huge budget of letters, which have been for months accumulating in Honolulu, has reached me—sixty in all—most of them posted from Fiji or Australia. I wonder if you actually realise that since the day I left Nasova,[1] nine months ago, not one letter of any sort or kind had reached me! If so, you can perhaps understand the hungry welcome with which I hailed the monster packet.

Yet even now, this is evidently only an instalment, as the latest home letter bears date Jan. 2d; so I suppose you had then tried some other address. I have now written to Auckland and Sydney, in case others may be lying there.

Meanwhile, as there is a good deal of reading in sixty

[1] Government House, Fiji.

long foreign letters, I have been well supplied for once. The parcel came by the evening coach, and I read till I could see no more—my eyes ached so. So I began again at dawn, and then took them with me to a lovely nook by the river, where I sat undisturbed the whole day, reading them over and over, and even now have not half digested them. I tried to read systematically (as some old gentlemen in India read the 'Times,' beginning with the oldest, and taking one a-day till the next mail comes in!), so I filed each lot of letters, and read them in order; it seemed almost like having a series of talks. Now, however, I look forward to receiving letters direct from England a very few days hence.

July 1, 1878.

To-day's post brought me the first letter I have received direct from you. It did seem strangely delightful to receive one *only* a month old. I carried it off to read in the luxurious solitude of my favourite "Forest Sanctuary"—an enchanting nook, where several huge grey boulders, moss-grown and fringed with ferns, lie in a little grassy glade, encircled by groups of solemn pines, and with an undergrowth of most fragrant yellow azaleas, dear to the busy buzzing bees, whose droning blends with the murmur of unseen waters, in "sweet and slumbrous melody,"—most soothing and captivating. Half the charm of this lovely sanctuary lies in the selfish delight of calling it my own. I doubt if any one else in the valley has discovered it; indeed it is but one of ten thousand corners,

equally sheltered and lovely, which few travellers allow themselves time to enjoy; and the inhabitants of the valley are all absorbed in the care of these eager sight-seers — only anxious to enable them to rush from one mountain-top to another with the requisite speed—so no one questions my right as sole proprietor of this fairy dell.

Of course, with coaches running regularly to the valley, the daily mail comes and goes, if not like clockwork, still sufficiently so for all practical purposes; and the sorting of the bag is a momentary interest, when every one crowds round to see what may fall to their lot in the distribution.

This morning, while waiting for the coach, an old Californian miner gave me a vivid description of the postal service as he remembered it twenty years ago; not in these—then undiscovered—mountain regions, but on the great plains, where the Pacific railroad now runs so smoothly.

In those days a heavily laden waggon starting from the eastern States took six months to cross the great continent, and emigrants travelled in large companies for security; so it was reckoned a tall feat when a party of keen, hard-riding, fearless men, resolved to carry letters from the shores of the Atlantic to those of the Pacific in fourteen days, and carried out their promise in the teeth of all difficulties. A company was formed, known as the Central Overland California and Pike's Peak Express. Almost the entire distance from ocean to ocean was divided into runs of sixty miles each, and at all such points rude log-huts were erected as stations for the Pony Express. Here

the most experienced scouts and trappers—men noted for their horsemanship and courage—were placed in charge of strong swift ponies, selected, like their riders, for their powers of endurance and general hardiness. They were a cross between the stout sure-footed Indian pony and the swift American horse.

Perilous lives these men led, in constant danger of attack by highway robbers or wild Indians; but the wages paid by the Company were sufficient to secure a staff of determined men, hard as nails, and accustomed to face danger and death without shrinking. Twelve hundred dollars, equal to £240, was the monthly wage of an Express rider.

Of course under such circumstances postage was high—the charge for a quarter-ounce letter being five dollars in gold, equal to one sovereign. The total weight carried was ten pounds. As a commercial speculation the experiment proved a failure; and after running steadily for two years, the Express Company was found to have lost 200,000 dollars, at which period it collapsed, leaving no trace of its existence save a few ruinous log-huts. The telegraph being then completed, its continuance was no longer deemed necessary.

On the east, the railway was already constructed as far as St Joseph, which consequently was the first pony-station on the New York side. The vast expanse of prairie and mountain lying between St Joseph and San Francisco had to be traversed in 240 hours, which was reckoned "good time,"—and no mistake about it, the distance being fully 2000 miles.

Once a-week a messenger started from either shore of the great continent. Spurring his steed to its utmost capacity, he galloped over hill and dale for sixty miles at a stretch, till he reached his destination, where the next Express man was waiting, ready to start without the delay of one moment, the incomer not waiting even to dismount, but tossing the precious letter-bag to its next guardian. Then man and beast enjoyed a well-earned rest, till the arrival of the messenger from the other direction, when they started on the return journey.

So marvellously punctual was the mail service, that the last man generally delivered up his charge within a few moments of the time fixed, notwithstanding all the troublous chances it might have encountered on its journey of 2000 miles of what might truly be called a "great, lonely land."

The general post, with heavier bags, reached California *vid* the Isthmus of Panama—to which point steamers ran twice a-month from New York and San Francisco. From one city to the other was a whole month's journey. The arrival of the eastern mail was the signal for wild excitement in San Francisco. Merchants eager for their business letters, and miners longing for a word from home, rushed to the post-office the moment the gun was fired to announce that the steamer was in harbour, each eager to take up a position as near as possible to the post-office window. In a few moments a line was formed, perhaps literally half a mile long, of anxious letter-seekers, and late arrivals knew that hours might elapse before they could hope to get near the window.

Then a sort of auction commenced, and men who had rushed in and secured good places in the front of the line (often without the smallest expectation of a letter, but simply as a speculation) sold their position to the highest bidder. £5, £10, £20 were sometimes paid down by eager men, flush of gold, rather than wait five or six hours for the letters they longed for, but which, too often, were expected in vain; and grievous was the disappointment with which at last they turned away. Some were even so anxious that they took up a post at the window hours before the steamer arrived — even waiting through the night—and after all, were compelled to abandon their position and go in search of needful food. Perhaps at that very moment the firing of the mail-gun called them back, to find a long line rapidly forming, at the end of which they had to take their places, with the prospect of again waiting for hours.

What a different scene from the San Francisco of to-day —the busy, bustling, vast city, with its intricate postal service, and daily mountains of mail-bags, brought from, and despatched to, all corners of the earth by railways, steamers, and sailing ships!

July 2d.

Do you remember my telling you of a cosy little cottage which forms one of the "suburbs" of this hotel? It has been tenanted nearly all the summer by two pleasant sisters with very nice children. They live near San Francisco, and come here almost every year; and being both

splendid horsewomen, have explored every accessible point for miles round. A young half-Spanish guide is specially devoted to their service, and escorts them on the most perilous rides.

We very soon became great friends, though my work generally keeps me in or very near the valley. But on their days of rest, they condescend to pleasant idling with me on lower levels.

I have also had some delightful expeditions with the sister of one of the great bankers of San Francisco, who, with her family has been staying here for some time. One morning we started at break of day, and walked to the Mirror Lake before sunrise,—a walk at all times exquisite, but doubly so now that the meadows are so richly strewn with flowers of every hue.

The valley affords a considerable variety of soil. In some parts it seems entirely composed of powdered granite bearing a scanty crop of low grass; while in other places there are tracts of deep sand, where the common bracken grows abundantly and rankly. A considerable portion of the meadows lies on a rich peaty soil, where coarse grasses and sedges luxuriate. Then, again, on our morning walk we passed by a small farm-steading, and corn-fields ready for the harvest,—a pleasant site for a home. Happily, however, little cultivation is allowed on this grand National Park.

Indeed there is a corner of danger lest, in the praiseworthy determination to preserve the valley from all ruthless "improvers," and leave it wholly to nature, it may

become an unmanageable wilderness. So long as the Indians had it to themselves, their frequent fires kept down the underwood, which is now growing up everywhere in such dense thickets, that soon all the finest views will be altogether hidden, and a regiment of wood-cutters will be required to clear them. Already many beautiful views which enchanted me in the early spring are quite lost, since the scrub has come into leaf; and of course every year will increase this evil.

We had made arrangements to have our food and sketching-gear carried to the lake by a carriage which brought a party of poor hurried tourists to see the sunrise, waken the echoes, and then instantly depart, leaving us to spend a long day in that delightfully secluded spot. We kindled a camp-fire, at which my companions cooked first a capital breakfast, and then an equally excellent luncheon, with strawberries and cream for dessert, while I secured a drawing of the little willow-fringed lake in its deep granite setting.

The strawberries and cream were provided by a gentle, graceful girl, by name Ida Howard, a true child of the valley, the lady of this little rock-girt lake, on the brink of which her father has built his nest, rears his nestlings, and lets boats to tourists. The girl always attracts me as a pleasant type of a Californian maiden, energetic and unselfish—relieving her mother of most household cares, devoted to a troop of younger brothers and sisters, coaxing them to prepare their school tasks, feeding them, starting them in time, mending their clothes, caring for the horses

and cattle, and withal, finding time to carry on her own studies unaided, and intensely interested in working at Euclid and Algebra! These still waters run deep!

In the afternoon we explored the narrow pine-clad Tenaya Canyon, till we came to a muddy pool, glorified by the golden cups of yellow water-lilies. It lies at the base of Cloud's Rest, which sweeps upward from this forest-belt in 6000 feet of smooth granite slabs, glacier-polished, and overlying one another as if artificially built.

Returning, we lingered beside the lakelet till the purple shades of evening had enfolded the base of the great hills, while (towering perpendicularly above us) the vertical face of the Split Dome, and the more distant summit of Cloud's Rest, glowed crimson in the red fire of the setting sun; and the lonely pool which had so faithfully mirrored its rising glory, still gave back flush for flush, and shade for shade, like a rare friend, sympathetic in every changing mood.

Then in the clear beautiful twilight we turned our faces westward, and made our way home through thickets of lupines, and azaleas, and tall fern—crossing rocky streams, and passing by groups of Indian bark-huts, whose inmates were roasting strips of bear's flesh at their camp-fires.

We passed by another camp as well, where a party from San Francisco are spending their vacation in glorious gipsy freedom, their tents pitched beneath the shelter of some grand old pines. They, too, were busily preparing their supper, having just returned from their various expeditions. One had been fishing, and brought back a

basket full of lovely trout; another was a geologist; a third an artist. Each had found a paradise after his own heart.

Presently we too reached our haven of rest, and had our full share of trout, just caught by the Indians.

We voted this day such a success, that we determined on a similar expedition in the opposite direction; and having got an old man with a cart to carry our cooking and sketching materials to a given point, we started for the base of the great El Capitan, that massive crag, upwards of 3000 feet in height, of which I told you on the day we arrived here. Only by walking along the base of such a crag as this, or the Sentinel, can you begin to realise its stupendous bulk. You see it just in front of you, and think you will soon walk past it, but you go on and on, and scarcely seem to change your own position. Then you begin to understand that El Capitan is a rock-wall nearly two miles long, and three-quarters of a mile high,—a vast square-cut block like polished ivory.

From a little distance you suppose this rock-face to be vertical, but on a closer approach you perceive that along the summit runs a ledge 500 feet thick, and projecting 100 feet,—proving how, in that awful internal landslip which formed the valley, the huge granite mass must have been rent, and slidden down from beneath this ledge.

You also gain an impression of size by attempting to scale the piles of tumbled fragments which lie heaped along its base. You think they are insignificant slopes at the foot of the crag, but a few minutes of hard and exhausting climbing among those huge irregular blocks of

rugged rock soon undeceives you. You find, too, that what appeared to be mere shrubs growing among the *débris* are actually stately oaks and ilex,[1] here called live oak; and that the pines, which seemed no bigger than average Scotch spruces, are pitch-pines and Douglas spruces, fully 200 feet in height.

And oh! how delicious is the dewy steam rising from the resinous needles of pines, and firs, and cedars, in the warm morning rays, and the aromatic scent of the California laurel,[2] with its glossy evergreen leaves!

We came to lovely reaches, where the river—no longer in flood, but flowing clear and transparent over a bed of glittering pebbles—winds in and out among groups of tall larches and pines, and where the sunlight trickles through the tremulous foliage of alders and willows which fringe its banks. There are places, too, where the eddying flood has left a thick deposit of soft white sand, and where stranded timber and great roots now lie bleaching in the sun.

We passed on through rank green grasses, so thickly enamelled with flowers, that the whole seemed as a misty, sunlit cloud of blossom. In the midst of these Elysian fields, we came suddenly on a small Indian camp—a party so newly arrived from Mono Lake that they had not even built the accustomed bark-huts, and a few boughs formed their only shelter. A wild-faced squaw looked up, startled by our approach; but an offering of sugar-plums and

[1] *Quercus vaccinifolia, Q. chrysolepis.*

[2] *Tetranthera Californica.*

apples to her children, and small coin to herself, had a soothing influence, and she gave me a lump of deer's fat with which to grease my boots—a very useful offering. On a tree beside her hung a wicker ark, containing a solemn, black-haired imp, really rather a pretty specimen of papoose, its head protected by the usual sunshade.

I am sorry to be obliged to confess that whatever dignity the American Indians may have possessed before they became familiar with their white brethren, those I have seen do not retain one vestige of the noble savage. Indeed, dirt and bad smells are the prominent characteristics of every party of Indians I have yet met. As to the graceful and romantic Indian maids of poetic novelists, I have not seen a girl with the smallest pretension to good looks; but even did such exist, "What," as some one remarked, "is beauty without soap?" And soap is a *cosmétique* unknown to these grimy faces.

Occasionally—but very rarely—it may occur to an Indian to wash his or her face and hands in the nearest stream, but nothing further in the way of bathing is ever dreamt of; and as a general rule, a woman's already filthy dress, or a man's leggings, form a convenient towel on which to rub, unwashed, the dirtiest hands that ever were seen—hands that have probably been recently plunged in the entrails of some newly killed animal, in search of dainty morsels to be swallowed raw, (not that this quest involves much selection, for no sort of offal comes amiss to an Indian palate!)

In their general antipathy to personal ablutions, the

Utes resemble a certain Scottish bailie, who combated a proposed expenditure on baths and wash-houses for the poor of a great northern city, and crowned his own testimony as to their superfluity by the emphatic statement—"I thank God that water has not touched my body these thirty years!" The Utes, however, have devised a primitive form of Turkish bath, which they find very efficacious in sickness. They construct a skeleton framework of wooden poles, which they cover with fur robes and blankets to prevent the escape of hot vapour. In the centre of this *impromptu* tent they dig a hole in the ground a couple of feet in depth, and fill it with hot stones roasted in a neighbouring fire. A seat is arranged above this pit, on which the patient takes his place, and pours a bucket of cold water upon the hot stones. The steam thus generated acts as a beneficial vapour-bath.

As regards the washing of clothes, such a practice is said to be wholly unknown. Even the man who has acquired a civilised shirt never dreams of renewing its beauty by soap and water. By only wearing it on high days and holidays, he contrives to make it last many years; but in its latter days it can scarcely be considered a desirable garment! No dowager's old lace can compare with it for richness of tone. It is *couleur Isabelle* with a vengeance!

Though I am assured that this personal uncleanliness is common to the whole race, it would of course be unfair to judge of American Indians in general by the specimens I have seen, all of whom belong to the Diggers and Pah-

utes, two of the most miserable and degraded tribes. To do so would be somewhat akin to evolving imaginary Austrians and Russians from a slight acquaintance with the poorest of the Irish peasantry! Among the multitudinous tribes scattered over this vast continent, there are men of all sorts and sizes—true men and false, and dwarfs and giants; and their speech is as varied as are their customs, every tribe having a language of its own, known only to its members.

In truth, this curse of Babel would weigh heavily on the great Indian nation, were it not for a silent language of signs, which is used by all alike, and is the medium of communication between all Indians of different tribes. It is frequently used even in family parties, or while on the march, or on hunting expeditions, or at other times when silence is deemed desirable. To the initiated it is as clear and rapid a means of communication as any in use in our deaf and dumb asylums—indeed more rapid, as certain signs are used to express whole phrases and symbolise ideas. The whole body is enlisted, and by its twistings and turnings affords a much more varied dictionary than we can extract from our finger alphabet. The few white men who have been admitted to terms of perfect intimacy with Indians, tell us that if a stranger could steal unawares near an Indian camp, he might well marvel at the occasional bursts of laughter, while not a human voice was to be heard; yet each individual gathered round the camp-fire is all the while drinking in some very interesting story, related by one of their number in the sign language.

According to official estimates, the Indians of the United States, who two hundred years ago numbered upwards of 2,000,000, are now reduced to 300,000. Even this comparatively small number forms a serious item in a country which treats them not as citizens, subject to the laws of the State, and under their protection, but as independent races.

No less than 180 distinct tribes are recognised as dwelling in the United States territory, without counting those of Alaska. Many of these tribes are subdivided into a large number of branches. Thus the Apaches of Arizona and New Mexico are divided into sixteen great families, varying in numbers from 100 to 2000. In Minnesota and Wisconsin there are nineteen distinct families of Chippewas, numbering about 23,000. The Cherokees and Chocktaws number respectively 17,000 and 16,000.

The Shoshones of Wyoming, Idaho, and Nevada are subdivided into twelve great families. The Utes, who are found in Nevada, Colorado, Wyoming, and New Mexico, count no less than sixty-two tribal divisions. Of these, thirty-one are known as Pai Utes, and are distinguished by such simple little names as Timpa-shau-wagotsits, Ichu-ar-rum-pats, Un-kapa-ru-kuiats, and so on. Of the great warlike tribe of Sioux, twenty-four bands, numbering from 200 to 6000, roam over Wyoming, Dakota, and Montana. By the way, I am told that "Sioux" is only an uncomplimentary nickname, abhorrent to these warlike Indians, whose true name is Dakotah.

Without going farther than the Eastern Sierras and

the Rocky Mountains, we find Assiniboins, Black Feet, Sansarks, Unkpapas, Yauktonaise, and Sissapapas (the last five being divisions of the great Dakotah nation), Piegans, Flat Heads, Blood Indians, Crees, &c.; while a little to the north roam the Shoshones, Snakes, Bannacks, Gros Ventres, Peu d'Oreilles, and Nez Percés; above all, the stalwart Crow Indians of the Yellowstone—and when you speak of the Yellowstone, you speak of a stream which has an independent course of 1300 miles ere its waters join those of the great Missouri. So you can readily understand that the Mountain Crows and the River Crows can form two very distinct communities. They are a race averaging considerably over six feet. Six-feet-four or -five inches is nothing uncommon in this family of giants, who still wear buffalo-robes and curiously embroidered garments, and live in tall conical tents, covered with buffalo-skins neatly fastened together, and (so far as lies in their power) keep up the customs of their ancestors.

The said tall conical tents, or rather houses, are formed of a framework of fir poles, planted in a wide circle at the base, and meeting at the top, where an opening allows for the escape of smoke from the fire, which is always in the middle of the lodge. The Crows keep their houses clean, and divide them into separate rooms by screens of wickerwork radiating from the fire to the outer wall. They pack pretty close, however, as several whole families contrive to stow themselves away in one *tepee*—*i.e.*, dwelling.

These circular houses are planted in one large circle, forming a perfect camp, within which the beasts are driven

at night. The house of the chief is marked by a shield hung on a spear, stuck outside the door. Sometimes the creature which the chief reverences as his *totem* or sacred beast, is represented on the shield, as on a knight's escutcheon; or, if it is a tamable being — such as an eagle, a hawk, or a jay—a living specimen is trained to perch thereon.

Every young "Crow," on arriving at man's estate, observes certain prolonged periods of vigil and fasting, and the first living creature of earth, air, or water on which his eyes rest during this spiritualised condition, is thenceforth recognised by him as the embodiment of his guardian spirit—the *totem* which he is bound to honour and protect to his life's end.[1]

One point in Crow etiquette which at once commends itself to the Celtic Highlander, as to all other faithful observers of the "Deisul," is the invariable custom of sending the calumet round the whole family circle in the correct sunwise course, just as a Briton naturally sends round the bottles after dinner.

The pipe is first presented to the chief, who blows a votive whiff north, south, east, west, heavenward, and earthward; after which, he inhales one deep breath for his own comfort, and hands the pipe to the man on his left hand, who sends it round to the next, and so on till it has completed its circuit, always following the course of the sun.

[1] On *totem* or *etu* worship in the Pacific, Egypt, and ancient Britain, see 'A Lady's Cruise in a French Man-of-War.' C. F. Gordon Cumming. Vol. i. pp. 226-228, 242-247; vol. ii. pp. 61, 194.

Farther south, but still dwelling in the vast Sierras, are such tribes as the warlike Navajos and Apaches, who keep up a ceaseless guerilla warfare with the prospectors and settlers in Arizona and Mexico, descending from their unknown strongholds, in the wildest mountain-ranges, to harry the rich cultivated lands, burning and massacring the pale-faces.

Very different from these (though also inhabiting the Sierras in Arizona and Mexico, on the tributaries of the great Colorado river) are the Moquis and Pueblo, and other semi-civilised tribes, whom some believe to be descendants of the once luxurious proud old Aztecs, and who are said still to watch day by day for the triumphant second advent of Montezuma. In their poverty and debasement they still cherish some traditions of their ancestors,—they worship the rising sun, they reverently tend the sacred fire, which is kept ever burning in their villages; and, to some extent, the tradition of old serpent-worship is still embodied in the form of a living rattlesnake, which receives a certain amount of homage, not unmingled with dread.

I do not know whether these dirty Diggers and Pah-utes have any such distinctive customs. The fact is, that they and their wigwams are so unfragrant that none of us care to make any attempt to study them at close quarters, though we all admit the scenic value of their bark-huts and the curling film of blue smoke, to give a point of interest to the landscape.

We lighted our own camp-fire in a sheltered nook of a

flowery meadow, and spent hours watching the prismatic lights encircling the Pohono Falls with a jewelled girdle like myriads of opals. We had scrambled far up the trail when first we caught a glimpse of this vision of beauty; then, as the sun sank behind us, and the rainbow floated upward out of our sight, we rapidly descended the trail—now lying in deep shade—and so kept it in sight till our shadow had crept up the opposite crags, and the last gleams of radiant colour rose to heaven on the tremulous spray-cloud, and so vanished from our sight.

It was a dream of ethereal loveliness—an embodied hymn of praise.

Then came the amber light of sunset, and the fiery glow on the pale granite crags, while the shadows changed to a deep purple, and the tall pines wore a darker and more velvety green.

July 3d.

Very early this morning I wandered up the valley to see the last of a cheery camping-party, who have for some time made their home beneath a large group of trees, on a tiny natural meadow of greenest grass, beside the beautiful River of Mercy.

I found them breaking up camp preparatory to a start for higher levels. It was a most picturesque scene. The ladies and children were busily washing up the breakfast things, and packing the pots and pans, the kettles, knives and forks, in great panniers, as mule-burdens; while the gentlemen were taking down the tents, and packing them in the smallest possible compass. Bales of blankets and

pillows were all the bedding required, and sundry necessary changes of raiment stowed away in light valises, all of which were shortly piled on the long-suffering mules, and tied on with long cords, till it became matter for wonder how any animals could possibly climb steep trails bearing such bulky burdens. But here, as elsewhere, mules are noted for their strength and endurance, and are far more serviceable for mountain work than horses. You cannot buy a good pack-mule under £30 (150 dollars), whereas a very fair pack-pony may be worth a third of that price.

The mules are strong, sinewy little beasts, wonderfully sagacious as a rule, though some are obstinately stupid, and the drivers of a mule-train find that their dumb friends have individual characteristics as strongly marked as any human being, and many a troublesome hour they have in persuading and guiding them in the right way. The persuasion is all of the gentlest and kindest sort, for these mountain men are very good indeed to their beasts, though I am told that they find a safety-valve for mental irritation in the tallest swearing of which the Anglo-Saxon tongue is capable.

This morning, and indeed every morning, some of the mules that had fared sumptuously on succulent meadow-grasses, objected strongly (and not without good reason) to the severe course of compression they were compelled to undergo, while bulky packs were being securely roped on their unwilling backs by the united efforts of two strong men — one on each side — with one foot firmly

planted against the poor brute's ribs, while they hauled at the ropes with might and main.

First of all, the *aparejos* (a stuffed cover which takes the place of the old-fashioned wooden pack-saddles) had to be girthed on (*sinch* is the word for girth here), during which process the mules fidgeted, and fretted, and twisted in dire discomfort; but when it came to the roping, they kicked with such right good will, that two of them contrived to kick themselves free of their burdens, and indulged in a comfortable and derisive roll on the grass, while the luckless packers collected their scattered goods (luckily, experience had taught them to keep at a safe distance from what is here known as "the business end" of a mule—namely, its heels; also, to possess no crockery, only tin); then, with exemplary patience, they recommenced their somewhat dangerous task.

At last everything was safely packed, and the procession started.

The last smouldering embers of the camp-fire were stamped out, the riding-horses were standing beneath the trees, all ready saddled and bridled, and in another minute the riders were up and away, cantering cheering along the river-bank, till they vanished among the tall cedars. Later in the day I watched them slowly ascending a zigzag trail on a distant hillside; they moved in single file, a long line of dark atoms, suggesting a procession of ants. And to-night I saw a faint glimmer of light in a far-away pine-forest, and I knew that there the little tents were pitched, and that pleasant voices were singing in chorus, as they

gathered round the bright log-fire. It reminded me of our happy camp-life in the glorious Himalayas, and made me more than half wish that I had joined these gipsies of the Sierras! If only there were fewer rattlesnakes!

I have not told you much about these, though they are an ever-present reality, and we need to tread carefully, lest what appears to be only a fallen stick should prove a deadly foe. Sometimes, as I sit alone sketching, I hear a slight rustle like that of a withered leaf. It may prove to be only an innocent mouse, but sometimes it is the rattle of the hateful snake, in whose favour I must say, that he invariably tries to glide away as fast as he can, the moment he sees his human fellow-creature.

Sometimes I arrest his flight by throwing at him a small cone or bit of gravel, taking good care never to get too near—that is to say, within springing distance. The snakes I see are generally about a yard in length, so they could spring about six feet. Allow eight feet for safety, and then flick the gravel. The snake instantly stops, curls himself up tight, and prepares for action, offensive and defensive. Rearing his ugly flat head to about a foot from the ground, he slowly moves it to and fro, keenly watching the movements of the enemy; and thus he remains on guard till the foe passes on her way—at least *this* foe does so, for I confess that a certain latent fear combines with my natural antipathy for killing any creature larger than a cockroach, which last is a work of necessity and self-defence. So no rattlesnake has had to wear mourning for any relation slain by me. Mr David, however, killed

one, and deprived it of its jacket and its rattle, which now hangs outside my window—not a very fragrant adornment! I do think the snakes get the worst of it, for I cannot hear that any one has ever been bitten in this neighbourhood, whereas few days pass without several being killed by parties out with the guides, who bring back their rattles as trophies. The rattle varies from one, to two and a half inches in length, by half an inch wide. It consists of several semi-transparent plates, like bits of gristle, one of which is added every year, so that a patriarchal snake may have ten or twelve links.

I cannot understand why there should be so many more here than in the Rocky Mountains, where one observant sportsman tells me that he has never seen any. And another, who lived in the mountains for eighteen months, only saw one, which had wriggled itself up to a height of 10,000 feet.

I am sure that you now quite sympathise with me in considering the rattlesnakes a drawback to camping-out, though people who come from the plains say that those we have here, are too few to be worth considering!

I am told that it is really a safeguard to lay a rough horsehair-rope on the grass right round your tent, as the rough ends of the hair are unpleasant to the snake, which turns aside to avoid gliding over it. The precaution is sufficiently simple to be worth trying.

Of course we could not have such a Paradise without a serpent; and that it is a true garden of delight, is beyond question.

It really is a comfort to know that no selfish individuals will ever be able by any process of purchase or law of might, to appropriate any part of this grand valley to the exclusion of their neighbours, or as a means of extorting money at every turn. Happily the United States Government (warned by the results of having allowed the Falls of Niagara to become private proverty) determined that certain districts, discovered in various parts of the States, and noted for their exceeding beauty, should, by Act of Congress, be appropriated for evermore "for public use, resort, and recreation, and be inalienable for all time."

Of the districts thus set apart, the Mariposa Big-Tree Grove and the Yō-semité Valley were voted by the Central Government as a gift to the State of California—a gift which was formally accepted by the State Congress, with conditions for the perpetual preservation of these unrivalled wonders of nature in their virgin beauty. So the Yō-semité National Park is the heritage of the people, who, one and all, are at liberty to pitch their camp here, and enjoy themselves to their hearts' content, provided they abstain from doing any manner of damage to tree or rock.

Everything in America is done on a large scale. It is a great country, and so it requires great parks. These are, consequently, marked out with a good sweeping hand. The San Luis Park covers 18,000 square miles; the North Park, in Colorado, has an area of 2000 square miles; the Middle Park, likewise in Colorado, covers 3000 square miles; and even little Estes Park is twelve miles in length!

The same wise provision has reserved the whole marvel-

lous volcanic district of the Upper Yellowstone in the Rocky Mountains, forming a national park in the north-western part of Wyoming as large as the whole of Yorkshire.

This Yellowstone Park is about sixty-five miles in length by fifty-five in width; consequently it has an area of 3575 square miles—a region of vast pine-forests, interspersed with hundreds of dormant volcanic cones and craters, and thousands of boiling springs and fountains of infinitely varied colour and chemical quality.

It has been estimated that "the Park" contains fully 5000 hot springs, of which about fifty are active geysers, throwing up fountains of varying height, some exceeding 200 feet. All these deposit various substances in endless variety.

Within the limits of this mighty Park lie the sources of five great rivers—namely, the Yellowstone, Madison, and Gardiner rivers, which, uniting with others, and receiving new names in the course of their long journey, eventually flow into the Gulf of Mexico; while the Green River (which is a branch of the Colorado) and the Snake River (source of the Columbia River) flow to the Gulf of California.

The Yellowstone River flows right through a lake of the same name, which covers an area of 300 square miles, and lies at an altitude of 7788 feet above the sea. The river descends thence with two falls, which, though only 140 and 360 feet in depth, are truly magnificent. It then rushes downward through the Grand Canyon, and for a distance of twenty miles flows through

a ravine of barely 500 feet in width, and between rock-walls of about 1000 feet in perpendicular height!

Here mountains of every conceivable grotesque form and strange colour are thrown together in indescribable confusion: huge buttresses, columns, cones of scoriæ; wildly irregular crags, sometimes massed, sometimes towering alone, occasionally assuming strangely symmetrical form, suggestive of mighty fortifications; weird, burnt, crumbling hills, traversed by awful chasms and dark gloomy canyons—some pink, some grey or black, others of a fiery red or yellow, but all bare and barren,—only a few cacti, or stunted juniper, contriving to exist in sheltered crevices, or some kindly coarse grasses, which clothe the flat summits.

After passing through many miles of this strange country by tracks winding along tortuous valleys, and crossing deep ravines and great mountain-ridges, you come to a district where the hillsides are terraced with series of the loveliest natural baths, formed by the deposit of silica and kindred substances, greatly resembling those we visited in the north of New Zealand, where we revelled in cool baths at the level of the lake, and then, as we rose from one terrace to another, found a succession of exquisite pools, varying in depth and increasing in temperature as we neared the beautiful geyser at the summit.

In New Zealand that marvellous region is jealously guarded by the Maories, but this Wonderland of the Yellowstone is the property of every American; and though the Indians may roam here as of yore, it will doubtless ere long become the great sanitarium of the

Northern Continent—a health-giving region, reserved by a wise Government for the good of all its people.

Yō-semité also claims to be health-giving, not by reason of medicinal waters, but of the purest, most exhilarating atmosphere, and every condition that heart can desire for the enjoyment of out-of-door life. And well do the Californians know how to appreciate it! Every year hundreds of busy business men allow themselves a spell of real gipsy life, so as not to waste one hour of their hardly earned holiday. They make up congenial parties, either purely domestic or happily selected, and packing themselves and their camping-gear on riding and pack horses, with one or two light waggons to carry supplies, they start either for the valley or one of the Big-Tree groves, and, carefully avoiding all hotels, they pitch their tents wherever they feel inclined, in some verdant glade, where the horses may find sweet pasture, while the gipsies kindle their camp-fires, and catch trout in the clear stream, which is certain to flow somewhere near.

Many ladies with their children, start on these prolonged picnics, with or without a "help," fully prepared to rough it, making sport of all difficulties; and these gather up stores of health and strength to carry back to their homes in the great cities. Of course the climate favours such a life to an unusual degree, as for fully six months in the year camping-out is really enjoyable, and a wet day is quite a startling event.

CHAPTER XIII.

THE FOURTH OF JULY—BALLS IN THE SIERRAS—A PARTY OF EXPLORERS — HETCH-HETCHY VALLEY — SUMMIT OF CLOUD'S REST—SUNSET—BLACKBERRIES.

July 4th.

THIS has been a great day in the valley; it is the grand national holiday to celebrate the proclamation of American independence, and is observed throughout the States as a day of rejoicing. Unluckily for his neighbours, the owner of the hot-baths considered that as music is noise, all noise must be musical; so he made dawn hideous by turning on a shrieking steam-whistle, and when even his own ears could no longer endure the horrid din, the entertainment was varied by discharges of dynamite, in order to awaken the echoes.

This hotel and the wooden shanties were adorned with flags, and stars and stripes floated in every direction. The Indians and the guides ran pony-races, and a certain amount of feasting was managed. Then the dining-room was cleared for a grand ball, which is now in full swing. I sat for a long time in the verandah, watching the pro-

ceedings with great interest, and have rarely seen such precision anywhere, save in a dancing-school.

The good folk of the valley have already got up several balls for their own entertainment, so they are all in good practice. They appoint the best dancer present to be floor-master for the evening; and it is his duty to regulate the order of the dances, and to take the lead in each. This involves not only dancing as correctly as a dancing-master, but also calling out in a loud clear voice directions for each little bit of the figure in quadrille, lancers, or country-dance, as it begins. It does sound so curious, when you stand a little way from the house, to hear this ringing voice far above the feeble music of the fiddles!

Of course there is no excuse for not dancing accurately, and accordingly every one does so with the utmost gravity. All the men are dressed in most respectable black suits. I scarcely recognised our friendly horsekeepers and guides (whose ordinary garb is a most picturesque variety of coloured suits, with bright handkerchiefs and broad-brimmed hats) when they suddenly appeared in this serious garb, dancing with all the solemnity of dervishes, following the grave but graceful lead of the principal horsekeeper.

As I watched this unexpected display of elegance, I bethought me of the comment made by a Scotch coachman, as he gazed into a ball-room where "the quality" were disporting themselves. "Weel," said he, "it really is a sight for the on-edicated, to see the deelicate way in which the gentry handle the weemen!"

I was the more astonished, because my preconceived ideas of a Californian ball-room had been rather rough, founded on tales from the mining districts. Some of the mining terms, which are very expressive in their ordinary application, are apt to be startling when applied to other subjects.

For instance, when a mine is fairly worked out, it is said to be "petered out"; and a thing which is complete, is said to be "plum." So when a stranger chanced recently to enter a ball-room in a mining town, and asked a comely Californian girl to dance, he was slightly puzzled on her replying, "Well, young man, I'd like! you bet! But I guess my legs are just plum petered out!"

I guess some of my friends here will be pretty well petered out before morning, as they announce their intention of keeping up the ball till daylight; and I congratulate myself that my sleeping quarters in the other house are almost out of earshot of the floor-master's concise words of command! How thankful I am that there can be no excuse for torturing the echoes tomorrow with that dreadful steam-whistle and thunderous explosives!

Yesterday a party of young men returned from a most successful camping-expedition in the High Sierras. It is about three weeks since they started from here, taking pack-mules to carry the very rudest of mountain-tents, blankets, cooking-pot and kettle, and as many stores as could be compressed into a very small compass. The Sierras supplied them with abundance of ice-cold water,

and they were able occasionally to replenish the larder by a lucky shot. I think they bagged two deer and a bear, and found that steaks of the latter, grilled on a camp-fire, were not to be despised by hungry men. However, they award the palm to the good roast-mutton, fresh vegetables, and home-made bread, on which they supped last night.

They returned jubilant, having enjoyed every hour of their mountaineering, and they have acquired a sun-browned look of perfect health, very different to their colour when they came here from the Eastern States. I quite envy them their trip, though the condition of their garments, all tattered and torn, and especially of their once strong boots (now scarcely to be recognised as such), speaks volumes for the hard work they have accomplished in climbing and scrambling.

They say they have had no hardships to speak of, and have enjoyed uninterrupted fine weather. They camped some nights in grassy valleys, beside limpid streams, and at other times in magnificent forests, at a height of about 7000 feet above the sea (all coniferous, of course).

One of these gentlemen, who has travelled a good deal in the Swiss Alps, says there is no comparison between them and these Californian Alps in point of picturesque beauty, they are of such different types. The former are by far the most attractive. Their ice-fields and snows give them a character which is wholly lacking in the Sierras, where glaciers proper have long ceased to exist, though they have left abundant traces of their work in the mighty rocks, polished till they glisten in the light, and the great

moraines, all strewn with the boulders and gravel deposited by the ice-rivers.

Then these valleys, beautiful though they be, are sunk so deep between precipitous gorges, as to produce little effect in a general view from any high point; and the vast ranges of cold grey granite, only relieved by the sombre green of pine-forests, becomes somewhat monotonous, however grand.

From my own experience of mountains, I should say that the Sierras are seen at a disadvantage, from the very circumstance which renders travelling here so delightful—namely, the unvarying fine weather of the summer months. All mountain scenery owes so much of its glory to the gloom which is only born of stormy skies; and here even a passing thunder-shower is a rare event during the glorious summer months.

These gentlemen scaled the prison walls (in other words, got out of the valley) by the zigzag trail which leads to the Yō-semité Falls, thus reaching an upper world about 7000 feet above the sea-level. There they struck an Indian trail which brought them to Porcupine Flat, a grassy plateau, where they camped for the night, and next day ascended Mount Hoffmann, a bare mass of granite towering upwards of 10,000 feet above the sea, and terminating in a mighty precipice.

It is the crowning-point of a range dividing the streams which feed the Yō-semité from those which flow to the Tenaya. The former spring from a group of small lakes which lie just at the foot of the mountain.

The ascent of Mount Hoffmann was an easy matter, and the view from the summit was very striking, owing to the number of ridges and peaks visible from thence, especially the beautiful group known as the Merced, because the River of Mercy has its sources among these cold mountains.

Descending from Mount Hoffmann, the camping-party very soon made their way to beautiful Lake Tenaya—a quiet mountain-tarn about a mile in length. They found delightful night-quarters beneath a group of pines at the head of the lake, and there made as cheery a camp as heart could desire. From here they looked across a valley glittering with beautiful little lakes, each surrounded by quaint granite pyramids and spires, to a very wonderful square-cut granite mass, apparently measuring about a thousand feet in every direction, and crowned at one end by a cluster of pinnacles towering several hundred feet higher. This is very appropriately named the Cathedral Peak; and, as seen from Lake Tenaya, the likeness to a grand Gothic cathedral is most remarkable.

Still following the trail by which the Indians annually travel to Mono Lake, the travellers next found themselves in the Tuolumne meadows, which are watered by a clear sparkling river. They lie in a most picturesque valley fully 9000 feet above the sea, and surrounded by peaks and ranges of from 12,000 to 13,000 feet in height. On the north side, about forty feet above the river, there are some chalybeate waters, called the Soda Springs, rather pleasant to drink. Near these they pitched their little tents, and indulged in soda-water to any amount.

Their next object was to reach the summit of Mount Dana, upwards of 13,000 feet. This also was accomplished without difficulty, and the climbers were rewarded with a magnificent view. On the one side, 7000 feet below them, and at a distance of six miles, lay the great Mono Lake—the Dead Sea of California—the waters of which are so strongly charged with mineral salts that no living thing can there exist, except the larvæ of a small fly, which contrives to thrive and multiply to a very unpleasant extent.

Beyond this lake lies the barren desolate wilderness of snow-clad ranges and naked granite-peaks which compose the region known as the Grand Basin—a tract so dry and sterile that it has offered small temptation to encroaching white men. So here many Indians, original owners of fertile lands to the south, have been driven, to work out hard problems of existence on the hungry desert.

In the opposite direction lies Mount Lyell, which disputes supremacy with Mount Dana.[1] The former is crowned by a sharp granite pinnacle which towers from a crest of eternal snow, and its base presents vast faces of precipice. The high snow-fields thereabouts bristle with hundreds of jagged granite-peaks and rock-needles averaging 12,000 feet.

Mount Dana, on the other hand, is a great mass of slate of a reddish-brown and green colour.

Beyond Mount Lyell they saw a magnificent peak, which they supposed to be Mount Ritter; and a little

[1] The height of Mount Dana is said to be 13,227 feet; that of Mount Lyell is 13,217.

farther on the same mighty ridge, a series of majestic pinnacles of glittering white granite. They are known as the Minarets. All these peaks and minarets are considered inaccessible, which, I should think, was the sole reason which could possibly inspire any one with a wish to climb them.

The travellers did not seek a nearer acquaintance with the Lyell and Merced groups, though somewhat tempted by hearing that that region is accounted one of the wildest and grandest in the Sierras; but their chief anxiety was to visit a beautiful valley of the same character as this, called the Hetch-Hetchy Valley. It has only recently been discovered, having been one of the sanctuaries of the Pah-ute Indians, who reckon on always finding there an abundant acorn-harvest.

This valley is quite easy of access from the lower end, a trail having been made the whole way from Big Oak Flat. From the upper end, it is a difficult but very beautiful expedition; and this was the route naturally preferred by these young men, to whom a little extra climbing was no objection.

So from Mount Dana they returned to their former camping-ground at Soda Springs, and thence started on a twenty-miles march down the Tuolumne canyon, a deep and narrow gorge, through which the river rushes between precipitous granite cliffs, over a bed of glacier-polished rocks, making a rapid descent without any great falls, but forming a succession of most beautiful shelving rapids and foaming cascades. There are two perpendicular falls,

which in any other country would be accounted worth travelling far to see, one of them being upwards of 200 feet in height—no trifle when the river is full, and pours its flood of melted snow in a grand cataract. But here these low falls are scarcely considered worth noticing.

Of course, no quadruped could attempt such a scramble as this expedition involved, over rocks so smooth and polished as to make walking disagreeable and rather dangerous. So the pack-mules were led round by a trail which strikes off at Lake Tenaya, and enters the Tuolumne valley at a beautiful point just below the "White Cascades," where the river falls rapidly in sheets of dazzling foam. A little farther down the canyon they found a lovely little meadow—green pastures beside still waters,—for the river here runs level for about a mile, and lies in quiet reaches as if resting after its feverish turmoil. Here they camped, greatly to the satisfaction of the mules, who revelled in the abundance of all good things. As they could not possibly be taken farther, they had the privilege of remaining in these pleasant pastures till the return of their masters, who, carrying with them only necessary food, dispensed with such superfluities as tents, and even blankets, and proceeded on their scramble down the canyon.

It varies greatly in width, being in some places simply a gorge, hemmed in by almost vertical cliffs, upwards of 100 feet in depth, seeming to touch the sky on either side, while the river rushes on in a succession of lovely cascades and rapids, similar to those which they had passed on the previous day.

At other points the canyon widens and forms a green valley, where pines and firs have found shelter, and grow in stately beauty. But in the narrower gorges there is not a vestige of soil—only the smooth shining slabs of granite, polished and scratched by the great glacier which once filled the valley to the depth of 800 or 1000 feet, up to which height its markings are clearly visible on the cliffs.

There are some beautiful falls, just where the Cathedral Creek (which has its source at the Cathedral Peak) joins the Tuolumne, and above these rises a stupendous mass of granite known as the Grand Mountain. *It is a huge bare rock* FOUR THOUSAND FEET *in height.* Just imagine what a great solid giant!—nearly 1000 feet higher than the mighty crag El Capitan, which guards the entrance of this valley!

Below this the gorge narrows, and the river flows between steep rock-walls, till it enters the Hetch-Hetchy valley, which is almost a counterpart of Yō-semité on a smaller scale. It is a crescent-shaped valley, about three miles in length, and half a mile wide at the broadest part. It lies 3650 feet above the sea, and, like Yō-semité, its level green meadows are sunk between high vertical granite crags. When the snows are melting in spring, one of these is almost a facsimile of El Capitan, but is *only* 1800 feet high. It has just such a fall as that which beautifies its great brother at the same season. There is also a huge rock 2270 feet high, which strongly resembles the Cathedral rock in the Yō-semité.

Then the great Hetch-Hetchy Fall is almost a replica of the "Great Grizzly" in this valley. Certainly it is *only* 1700 feet high, and is less perpendicular than the Yō-semité Fall; but it has a larger volume of water, and is exceedingly beautiful. In the spring-time many additional falls pour into the valley, which terminates in a gorge so narrow that the waters thus accumulated cannot escape, but form a large lake, flooding the meadows, which later in the season afford pasturage to the flocks of sheep and herds of cattle which are driven up from Big Oak Flat.

There is a good deal of fine timber in the valley,—in short, the exploring party all agree that it is a very grand spot, though by no means so stupendous as this valley. This verdict greatly consoles me, as I am not likely to visit it; and the few people who have previously described it to me have, I fancy, rather unduly extolled it, and made me feel as if I was bound to undergo any amount of fatigue rather than miss seeing it.

The fact is, I do feel very idle as regards making any effort to visit distant points. All my immediate surroundings here are so perfectly beautiful, and the views of the Sierras, from any of the near points, are so extensive and so grand, that I am satisfied, and feel no inclination to face the discomforts of camp-life. This green valley is my Capua; it holds me spellbound, and magnifies all the difficulties and fatigues involved in an expedition to the High Sierras: so you must rest content with a vague dream of interminable granite-ranges—a

wilderness of bare ridges, with here and there a fantastic knob or pinnacle, and on every side dark-green pine-forests, so that the general effect of the landscape is that of a troubled grey sea, here and there tinged with dull green.

Such is the prosaic vision I conjure up whenever my locomotive demon bids me be up and away. But it really is no hardship to camp out in such a blessed climate as this,—a few carefully laid young boughs of red fir make a couch as fragrant and as springy as a closely packed bed of heather, with the blossoms set upright. And then the stillness of the great Sierras and the solemn gloom of the forest, canopied by the wondrously blue scarlet heavens, have an indescribable fascination, which often tempts me to go and camp out myself. But then comes the one grand argument which counteracts all romance, and decides me in favour of this pleasant little room up-stairs; and the argument is summed up in one word—RATTLESNAKES!

July 12th.

Ever since the day in spring when the deep snow foiled our attempt to reach the summit of Cloud's Rest, I have been purposing to make it out, but never did so till yesterday.

I arranged overnight to join the sisters at the cottage, and ride up together in the first gleam of dawn.

Something occurred to detain them, so I rode on alone up the dewy valley, through the azalea-thickets and the

great clumps of dark pine, rejoicing in the sweet freshness of the morning air and the blessed silence. Only the faint breeze murmured melodiously as it rustled amid the pine-boughs, and the blue jays chattered to their mates.

Through the night there had been a soft summer shower, and now wreaths of slowly curling vapour floated among the crags, becoming ever thinner and more transparent, till there remained only a luminous haze, which magnified rocks and trees, transforming them to spectral giants.

The beautiful Illillouette canyon still lay in deep gloom as I crossed its crystal stream and began the steep ascent of the Merced canyon. Presently the pine-crested summits of the highest crags shone like rubies in the light of the rising sun, and a misty golden glow stole through the forest, and gleamed on the polished face of the great Glacier Point, while the pine-woods in the deep gulches assumed a bluer shade of purple.

I wonder if the remembrance of the loveliest expeditions you ever made in the Highlands will help your imagination to fill in this outline of an enchanting morning ride, throwing in wild flowers, and golden mosses, and squirrels, and notes of birds, and all manner of beautiful details.

On reaching the little rest-house at the foot of the Nevada Falls I found three very pleasant Anglo-Indians[1] just starting thence for the same bourne, under the care of one of the guides—Murphy by name—a rugged old Californian of the ideal type. So, leaving a message for the

[1] I may venture to name Mr and Mrs Ernest Birch and Sir John Campbell Brown as the companions of this delightful day.

sisters, I joined these pilgrims from the Indian land, and we rode on together, toiling up the steep trail by the lovely Nevada Falls (which seem as full as ever, though the snow-fed Yō-semité Falls have shrunk to a quarter of their spring volume, and all the temporary falls have quite dried up).

The mountain meadows near which, on our first visit, we gathered the crimson snow-flowers, are now transformed to fairy-like lawns of flowery pasture, where sheep are browsing contentedly, while here and there a solitary Indian wanders along the sparkling stream, thence alluring many a speckled trout.

Skirting the base of the huge Split Dome (which George Anderson, regarding the giant with all the pride of a conqueror, frequently invites me to ascend under his able guidance, but which I consider as a feat too dangerous to compensate for the risk), we gradually ascended into the higher forest, composed chiefly of Douglas spruce, yellow pine, and silver fir, with here and there open glades or "parks"—*i.e.*, grassy slopes, dotted with clumps of aspen, and cotton-wood, and flowering dog-wood; green valleys, watered by clear rippling streamlets—most tempting feeding-ground for deer.

These forests are singularly open—no sombre gloom about them. Nowhere are the pines so crowded as to lose their individuality, even where they are most richly massed. Each solemn pyramid rises distinctly, preserving its own dignity, and allowing the sunlight to play freely on the flowers and mosses which carpet the ground below.

I am told by men who know the Sierras well, that each species of fir seems to prefer a special altitude, so that an experienced forester can form a fair estimate of the height to which he has climbed by observing what class of trees predominate, and their condition, whether flourishing, or dwarfed and poor. Of course the same species may clothe the mountains for a space of several thousand feet; but whereas on the lower levels only small pines stand singly or in scattered groups (their stunted growth telling of seasons of drought and scorching), an ascent of 4000 to 5000 feet brings him to the true pine-belt.

At this level all the loveliest species of the cone-bearing family grow in stately groups, like stanch clansmen ranged around their chief. The magnificent silver fir seems to prefer a somewhat higher level of this middle zone, in which alone the trees attain perfection, apparently finding the richest soil and most equable climate half-way between the thirsty foot-hills and the storm-swept summits.

The mountain-ridges are indeed sprinkled to a height of about 12,000 feet, with dwarfed, gnarled trees, that look as weather-beaten as the disintegrated rock to which they cling. They stand mute witnesses to the ceaseless battles which, through long years, they have waged with wintry winds, and frosts, and snows, in that hungry upper world, where these frugal hermits derive their sole nourishment from the dews of heaven and its sunlight.

Following a very circuitous route, we eventually found ourselves at the back of Cloud's Rest, which we then

ascended by so gentle a gradient that we were able to ride almost to the summit. There we found the sisters quietly seated at luncheon—Manuel, the Spanish guide, having brought them up by a very dangerous short cut, where one of the horses had fallen backward, but, wonderful to relate, had not seriously damaged either himself or his rider.

Never was luncheon more acceptable; but mine was hurried over, to allow time for a careful bird's-eye drawing from this high point, 10,000 feet above the sea. Just in front of us, but 1000 feet lower, rose the Split Dome—the strangest, ghostliest-looking crag in all creation.

We had left the valley all aglow with rich colour—greenest meadows and foliage, in which gold and russet, with touches of crimson, mingled with the dark hue of the pine-woods. Here we suddenly found ourselves on a bare granite summit, overlooking a world of white granite domes and ledges and crags—a pale spirit-world in which all is colourless—spectral even in the sunlight; and how weird it must be in the moonlight!

Here and there huge rock-masses stand prominent, suggesting ancient keeps; but the general effect is rather that of a boundless ocean of motionless waves—range beyond range of undulating, arid ridges extending in grand sweeps to the farthest horizon,—a vast expanse of white and grey and green—quiet harmonious greys and sober greens. Overhead a canopy of clear cold blue and floating clouds, white and dazzling as the snow on the distant peaks, but casting light drifting shadows on the pale world below.

A deathlike stillness pervades the scene—not a cry of beast nor voice of bird breaks the deep silence which reigns in this high wilderness.

Overlooking this wide expanse of billowy mountain-ranges, we could trace the course of ancient glaciers by the tinge of green, telling of distant forests that have sprung up wherever the ice-rivers once flowed (bearing on their smooth surface the boulders loosened by the action of frost from the great domes and pinnacles), crushing and grinding the rock-pavement, and at last depositing the crumbling rocks and boulders, and so forming moraines —virgin soil, on which vegetation must have seemed to spring up by magic, clothing that gravelly bed with tender green.

Then, as the soil deepened with the decay of successive ages, the forests came into being, growing year by year more luxuriantly wherever the deposit of the moraines gave them a chance, and skirting the pavements of smooth granite so highly polished by the Ice-king that no crumbling soil could there find a resting-place, and not even the humblest moss could grow, or has been able to do so to the present day. So the forest-robes of the Grey Giants act the part of skirts rather than of mantle, since the bare shoulders remain exposed and cold.

To the right we looked down a steep slope of 6000 feet of the barest granite slabs, into the vast chasm, wherein the valley lies in green repose, half in light and half in shadow, and a wavering line of blue and silver marks the course of the River of Mercy.

We lingered so long on the summit that the day was far gone ere we commenced the descent; and as we rode through the forest glades, we caught lovely vistas of the distant hills, no longer grey and ghastly, but etherealised by the golden rays of a level sun—a mellow glow, blending all harsh lines in a flood of glory, and changing the sombre hues of the pine-forests to a rich velvety golden green.

Presently the gold changed to a flush of crimson, and this to ethereal amethyst, lighting up the summits of the Sierras with glittering pinnacles. Range beyond range seemed to blend in that rosy light, while the pine-clad valleys lay steeped in varying shades of purply blue. Every tint of rose and violet, deepening to purple and indigo, was successively thrown on the landscape, as if the sinking sun were trying a series of effects with coloured fire.

When the sunset light seemed to have quite died away, and all our world lay in shadow, then commenced an after-glow, in which colour seemed to run riot—blue-grey clouds were fringed with orange and vermilion, while dove-colour became crimson.

Leaving the Anglo-Indians at the Nevada Falls rest-house, I followed the river with the sisters, taking the short cut down the wooden ladders, while Manuel led the horses round by the long trail. It was pitch-dark ere he rejoined us, and, tired as I was, I preferred walking down the canyon to trusting the chances of a fall among the boulders, though in truth the beasts were surer of foot than any human being.

So I was not sorry when, at 10 P.M., we saw the lights of the village, and were welcomed back with Californian heartiness. The great feature of the scratch supper that awaited us was a large basket of splendid ripe blackberries from the low country, where they are grown for the market as we grow raspberries. They lose the wild gamey flavour which makes our blackberry rank above other fruits, as grouse above other birds; but they are nevertheless excellent, especially when accompanied by a good bowl of rich cream.

CHAPTER XIV.

HUMAN SHEEP—EXHIBITION—WATKINS'S PHOTOGRAPHS—FAREWELL TO YŌ-SEMITÉ—TUOLUMNE BIG TREE—PLACER-MINING—CHINESE CAMP—SONORA—PACTOLUS—HYDRAULIC MINING—A MINER'S CITY—FRUIT AND DUST.

July 20th.

CERTAINLY human beings are wonderfully like sheep; not independent, fearless, mountain sheep, which sportsmen describe as full of individual character—but regular domestic follow-my-leader sheep. They must move in flocks or not at all. Just as the Sassenachs [1] never dream of visiting Scotland in the beautiful spring and summer months, but pour in in an unmanageable flood during the autumn, so it is here.

For the last six weeks there has not been an empty bed in any of the hotels, and camping-parties have been legion.

Now, though the weather is lovelier than ever, the valley is wellnigh deserted. I am the sole surviving guest at

[1] *Sassenach*, Saxon—the name by which the Celtic Highlanders describe the dwellers in the low country.

this hotel, though the sisters still occupy the cottage. All the regular inhabitants of the valley hang about in listless idleness, their occupation gone for the present, and their herds of mules and ponies turned out to grass. They expect a short spirt of work a little later in the summer, during certain holidays, but "the season" is apparently at an end.

Of course a few people continue to drop in, and the coaches run as usual. There is still a pleasant party at one of the hotels, including a very clever and agreeable artist, Mr Bradford, who met you some years ago at Niddry Lodge, when he came to London, on his return from a wonderful expedition to Greenland, undertaken solely to paint icebergs, in which he has been eminently successful. Now he is devoting his brush to wonders nearer home, and more attractive to ordinary mortals. (Don't you observe that people in general prefer subjects with which they are, or might be, familiar, to the grandest pictures of unknown scenes?)

I have myself held rather an amusing Great Exhibition this afternoon. Latterly I have repeatedly been asked to "do portfolio" for the edification of various friends; but the people who took the keenest interest in all the sketches were just those who had not seen them, so I had promised them all to have a grand show before I leave the valley. That sad day, alas! is drawing near; so, having issued a general invitation to every man, woman, and child in the neighbourhood, I borrowed a lot of sheets from my landlady, who allowed me to nail them all round the outside of the

wooden house. To these I fastened each sketch with small pins, so that the verandah became a famous picture-gallery.

I certainly have got through a good deal of work in the last three months, having twenty-five finished drawings, and as many more very carefully drawn and half coloured. Most of these are large, for water-colour sketches—about thirty by twenty inches—as I find it far more troublesome to express such vast subjects on a smaller scale.

I was amused by the zeal with which one of the guides constituted himself showman, and went round and round the verandah descanting on every drawing. Hitherto he has always been so busy with tourists, that I had not previously discovered this kindred spirit. He did his work thoroughly; for when I returned from my walk, I found him still hard at it! I was much gratified by the enthusiasm of the Yō-semité-ites, as they recognised all their favourite points of view, and vouched for the rigid accuracy of each,—that being the one quality for which I have striven, feeling sorely aggrieved by the unscrupulous manner in which some celebrated artists have sacrificed faithfulness of outline to make grand Nature fit their ideal. They are the fashionable staymakers and general improvers of the Sierras!

Happily for the Yō-semité, it lends itself admirably to photography, and has found various enthusiastic artists in that line, chief among whom still ranks Mr Watkins,[1]

[1] Mr Watkins has conferred so great a boon on travellers in making the valley known when it was first discovered (and only to be reached by

whose beautiful work reached us in England some years ago, and first made me long to visit this grand region. He has been working here all this summer, camping in the valley, and carrying his materials in a great covered waggon, which he stations at some accessible spot, and thence makes his expeditions to all the finest points.

July 22d.

I have really decided to uproot myself this week, but it is a great struggle. I cannot tell you how I have grown to love this valley. Each mighty crag has become an individual friend;—each flowery bed in the sunny meadows, and all the green glades in the pine-forests, where the darling little squirrels have borne me company through the happy days;—each quiet bend of the poplar-shaded river, and all the merry rippling rivulets, laughing and leaping in frothy foaming falls and rapids, then resting in tranquil reaches, where the light falls tremulously through the overshadowing golden-green leaves, and plays on the shadowy pools, revealing the flakes of glittering

difficult and dangerous trails), that it was a matter of sincere regret to many to learn that, through business difficulties, all his original photographic plates passed to other hands. The new photographs above referred to, which are superior to the original set, are now sold by Mr Watkins himself at 427 Montgomery Street, San Francisco. And as it is only on these that the artist reaps any profit, travellers have a double inducement to purchase no others. I have mentioned this to friends visiting San Francisco; but the agents for the original photos have generally waylaid them, offering to show them the only place where Watkins's photos were to be sold, and so have secured the custom of the strangers.

mica, which we call Pilgrim's gold,—all these are the friends who have whispered messages of peace, and gladdened me with their beauty for so many weeks. Now the thought of leaving them for ever makes me sad.

The human friends urge me to stay on and see the valley in "the fall," when autumn tints give touches of colour to the gulches, and when the smoke of the low-country fires throws a warm lurid haze over the whole landscape.

But already I have watched many changes. The waterfalls, which in May and June were mighty cataracts, have now dwindled to silvery ribbons. The glory of the scented azaleas is departing; and this evening I have been sitting among the golden "stooks" in a yellow harvest-field which was a fresh young green the first morning we passed it. It is only a little field, happily too small for the wholesale harvesting of the great wheat-valleys!

July 24th.

I have had my last expedition from the valley to a high summit I had never before visited—namely, the Sentinel Dome, which lies beyond the giant Sentinel Rock-needle. An English lady bore me company, and the excellent Murphy offered himself as our escort—a picturesque rugged Californian, well in keeping with his surroundings.

I need not give you details of our day, which would sound to you only like an oft-repeated echo of what you

have already heard (just as I sometimes hear a single thunder-clap reverberated from one great crag to another, till it seems as though it would never cease). Of course, the reality is always full of new delight—such views as these could never be monotonous, and, as I see them daily from new points, they are ever varying.

Suffice it to say, that we ascended a terraced trail till we reached the bald rounded summit of a grey granite dome[1] towering 4000 feet above the valley, a wind-swept rock-pavement, with a few strangely picturesque old cedars, blasted and splintered by many a wintry storm.

Of course the panorama in every direction was grand, the farthest peaks showing sharply through air so crisp and clear that it seemed to glitter. Above all, there was the unspeakable delight, peculiar to these high regions, of unbroken stillness — not one distinct sound breaks the solemn silence of the hills. And yet, as you listen intently, you realise that what you deemed silence is, in truth, a mingling of multitudinous whispering voices of nature — the faint sighing of the breeze as it sweeps lightly through the pine-forests, and the distant murmur of the many waterfalls. Distance has mellowed the thunder of those falling waters, as years soften saddest memories.

When I had looked my last on the wide ocean-like expanse of undulating granite ranges, Murphy led the way by a very rough but beautiful forest-trail, till we struck the Illillouette above the falls, and halted for luncheon

[1] Sentinel Dome, 4125 feet = 8125 feet above the sea.





VIEW OF THE SIERRAS FROM SENTINEL DOME



in an exquisitely green meadow beside the cool lovely river.

What a contrast from the ghastly region all around us! How the tired horses did revel in those luscious green pastures, and how loath both they and their riders were to abandon so pleasant a resting-place! But new visions of beauty met us at every turn on the circuitous homeward trail, and I am fain to believe that this last ride has been the loveliest of all.

It has been a long day—starting with the summer dawn, and returning in the twilight; and then a round of the village to say good-bye to many friends. Now I must sorrowfully finish packing—so good night.

CHINESE CAMP, *July 25th.*

Alas! what a change has come over the spirit of my dream! This morning in Paradise; to-night in—well, in a forsaken mining village—of all dismal and dreary things on earth, the most hideous.

Never had the valley looked more lovely than when, after many hearty farewells, I took my seat, as sole passenger, on the top of the Oak Flat coach, and drove away in the early dawn; never had El Capitan appeared so stupendous as when, after skirting its base, the coach toiled up the steep road through the hanging oak forest, and I looked back for the last time to the beautiful, majestic crags, and the green valley which has been my home for three such happy months.

For the first few hours the road lay through a very fine pine-forest, with here and there a solitary plant of the tall pale lily of the Sierras, which is just like the "virgin lily" of our own gardens—a lovely queen of blossoms.

We passed through the Tuolumne grove of Big trees, where, by a quaint freak, the road is led right through the heart of a grand old burnt stump, known as the Dead Giant. He had so long been used by the Indians as a camping-place and kitchen, that his inside was quite burnt out, and at last the main shaft fell; so only the huge base remains, like a strong red tower, ninety-three feet in circumference. The woodman's saw has completed the tunnel right through the poor burnt heart, and now the tall coach, with its mixed company from many lands, drives daily through the great tree, that for so many centuries has here reigned lord of the forest.

Having no other passenger to consider, the coachman very good-naturedly pulled up at the tree, and waited patiently while I found a good sketching-point, and secured a rapid drawing. He was good enough to set me down as being "of the right sort," because, one of the wheelers having fallen, I jumped down and held the leaders till he had loosed the traces and restored order. Knowing my inveterate cowardice with respect to horses, you will fully appreciate the situation!

We halted for luncheon at a pretty cottage, covered with trailing hops: a cheery pleasant woman, like an English farmer's wife, came out to greet us—and to welcome us to "a square meal," with good roast-meat, and

the invariable big teapot. I profited by some spare minutes to work at my sketch of the Dead Giant, whereat the old lady was vastly entertained. "Why," said she, "you must be the lady I hear them talk of *who makes pictures, just like a man!* And—why, dear me! you wear a man's hat! Why, I do believe you are a man! Come now, do tell me,—aren't you a man really?"

I tried hard to make her believe that it was quite correct for English ladies to wear wide-brimmed soft felt hats, but the effort was hopeless. Neither she nor any of the women in the valley could believe it, and I felt really glad when an essentially feminine and golden-haired English woman arrived there, wearing a ditto.

Why my poor little water-colour paint-box should be considered masculine I cannot say, but it attracted great notice in the valley as something quite unknown, even to most of the tourists,—the artist masculine, armed with cumbersome oil-paints, being the only specimen of the genus known in the Sierras.

All this afternoon our route has lain through old fields —the very country to which we all remember the rush from England, when first the gold-fever broke out. Then thousands and tens of thousands of all nations were here, digging and washing, and dozens of coaches ran daily over roads where to-day I travelled in solitary state on my coach-and-five, in clouds of dust and grilling heat. The whole country in every direction has been dug out or tunnelled —every ounce of earth has been washed away, leaving only curiously contorted layers of rock. You can imagine

no devastation more dreary and hideous. All the mines hereabouts are considered to be worked out, and we saw some very disheartened-looking men on the tramp, seeking better luck.

The coachman gave a lift to a fine young Cornish lad, who said he had already walked for many a weary day in search of work, and had become well acquainted with the pangs of hunger. Of course many of the miners are a roving lot of inveterate wanderers,—rolling stones, who make their pile one day and lose it the next, then try elsewhere, work hard for a while, invest in a claim—which very likely turns out unlucky—and then have to begin again. Possibly their claim had been carefully "salted,"—*i. e.*, sprinkled with gold-dust by the last owner, with a view to getting rid of a worthless possession.

All the skeletonised country hereabouts tells of old placer-mining, which was the early superficial system of washing the loose gold deposited in alluvial soil, by means of the old-fashioned, primitive "cradle," which was a rude hand-sluice. The refuse soil which has been thus washed is called "tailings"; and this is what the careful Chinamen and Indians now wash a second and even a third time, always with some result.

We passed through some of the original settlements of the early miners, where the gold-seekers have scooped out hollows in every bank, and the earth is burrowed as if it were a rabbit-warren, and seamed with deep ditches dug as channels to bring water for the gold-washing. Now not one living creature remains of all that swarming

throng. Only straggling rows of shabby dismantled buildings, and a few squalid weather-board huts, with flaunting fronts, proclaiming them to be stores (like pigmies hiding behind monstrous masks), still stand desolate and lone,—unsightly reminders of those toilers in dirt and discomfort who created these mining stations.

Here and there roads, now disused, mark the direction of some mountain-mine which once was the centre of hope and keenest interest, to men gathered from the east and from the west, the north and the south—men who, in those days of mad excitement, periodically poured down from their remote camps, carrying their gold-dust in bags, and armed with pistols and bowie-knives, bent on a Sabbath-day's rest from hard labour, and the full enjoyment of as much chain-lightning whisky, and the row to follow, as could conveniently be procured!

The capital of all this district, and the central meeting-place of these choice spirits, was Chinese Camp, where we now are. It is a tumble-down, semi-deserted town. The liveliest spot is the hotel, where a few men are hanging about, on their way to Sonora, where there is a small temporary revival of excitement.[1]

[1] These mining cities are like Jonah's gourd. They come up in a night, and perish in a night. The 'San Francisco News Letter' gives a graphic description of the rapid growth of one which only sprouted in August 1881, when a number of miners assembled at a silver district in Dakota, U.S., not far from Deadwood. They fixed on the most desirable site for their town, drew lots for the different pieces of ground, arranged the rules of government, and named the place "West Virginia City." Within two days the mushroom city contained 1000 inhabitants and nine drinking-saloons. On the following day restaurants were opened; also two faro

Nothing astonishes me more than to see the good fruit, which appears as if by magic, at the various wayside inns, where apparently the only crop that flourishes is dust,—a choking, fine grey dust which permeates all things. The fruit is the only tempting food here; for though a substantial "square meal" of beef, Indian corn, and potatoes awaited the coach, I was nearly sickened by the multitude of black flies which crawled all over the table and darkened the windows in buzzing swarms. It was therefore a double treat when a splendid dish of large, juicy blackberries appeared, supported by a bowl of rich cream—both unexpected luxuries. I think I have told you that quantities of blackberries are grown for the market all over this country, and very good they are.

SONORA, *Friday 28th.*

Left Chinese Camp at sunrise, without much regret. The coach was driven by its proprietor, who proved a pleasant companion, and told me much of the story of the strange country through which we were passing. Such hideous country! a world of honeycombed rocks and dust, only relieved by turbid red streams, telling of the eager gold-seekers, who are so busily washing the soil in every direction.

In some of the little valleys, watered (and occasionally overflowed) by mountain torrents, we came on parties of

banks. On the fourth day, the first number of a daily newspaper was issued. Within a week fifty buildings were erected, and 500 dollars were paid for desirable building-sites.

gulch-miners—in other words, "diggers," as distinguished from those engaged in quartz-crushing. The latter, of course, require a considerable outlay of capital in machinery and labour; whereas any strong man owning a pick and shovel can sink a gulch—in other words, dig a deep wide ditch, into which he can lead water from a higher level by means of a flume, which is a simple aqueduct formed by a series of long wooden troughs raised on trestles. Then he can dig and wash the soil at his leisure; and though rarely rewarded by finding nuggets such as gladden the gold-diggers of Australia, he may hope (by means of quicksilver) to secure a considerable amount of gold-dust, with occasional morsels the size of a pin's head.

It is dirty, disagreeable work, and generally involves standing up to the knees in water and mud from morning till night, sluicing, and gulching, and washing. So the prize is hardly earned; and now that white men have effectually skimmed the cream of this surface gold, they are content to abandon the field to the Chinamen, who, like patient and frugal gleaners, go carefully over the ground, and find enough of gold-dust to repay their toil: so every stream is red and muddy with the ceaseless washing.

We drove through the ruined remains of what have been quite large mining towns, now utterly deserted—long rows of dismal wooden shanties, dust-coloured or glaring white, with hot zinc roofs. Every bit of soil, for miles and miles, has been dug and washed, and every inch of the rocks thus laid bare has been picked and examined

by the gold-hunters. But here and there we saw fertile orchards and vineyards, and learnt that some provident soul had created dams to trap the red alluvial "slum" as it floated away in the turbid streams; so whether he got gold or not, he made sure of perhaps many acres of good fertile land, which still abides, and makes the very best garden soil. It was quite saddening to see many such orchards deserted, and to think of all the good toil that has here been wasted.

For some miles our road lay along the broad ancient bed of the Stanislaus river, which, some years ago, was by superhuman labour turned into a new channel, from a conviction that it would prove to be another Pactolus, yielding untold gold. It proved to be untold, in the sense of infinitesimal, to the amazement and disgust of all concerned.

The miners have their own theories of a Californian Pactolus, which seem to be well supported by modern experiments. They believe that in antediluvian days a vast river flowed over great regions in California, washing down immense deposits of auriferous quartz from the mountains. Loose fragments of gold and gold-dust were carried down by the torrent, and, being heaviest, sank to the bottom of the stream, and there remained. So the channel became thickly strewn with gold.

In course of ages the river disappeared, and its bed was, in places, covered to the depth of hundreds of feet by masses of lava-rock or gravel. Elsewhere the channel was upheaved, so that it is to be traced on some high mountain-sides.

So firmly do Californian miners believe in this theory, that where they find indications of having struck the course of the ancient river-bed, they will invest huge sums of money in tunnels and flumes for carrying away the loose rock and soil, which they must remove to reach the bed. Thus hills, perhaps hundreds of feet in depth, are washed away by the irresistible force of water.

Where only a shallow deposit is found, individual parties can work it by sheer physical toil; but where it is very deep, there hydraulic mining companies are formed.

The soil being removed, the miner's theory certainly seems to be proven, for the sub-strata does resemble the bed of a vast river,—an immense deposit of fine gravel, with water-worn, polished, rounded rock-boulders, and layers of rock all water-eaten and honeycombed—and much gold lodged in the rock, and lying loose in the fine gravel. So this is declared to be the bed of the pre-Adamite river.

Whether this be so or not, the system of hydraulic mining which was introduced, is truly wonderful in its results. If it is desired to wash away the whole side of a mountain, perhaps a couple of thousand kegs of gun-powder are inserted in every direction, and exploded. Thus the earth and rocks are loosened. Then water-power is brought to bear.

The water is sometimes led from reservoirs a hundred miles distant, and at a great elevation. It is brought through eight or ten inch iron pipes, and ejected through

a nozzle like that of a fire-hose. Such is its impetus that it would cut a man in two should he chance to be in the way of the stream, even at a considerable distance from the pipe. Half-a-dozen such hose directed against a hill-side, play with such irresistible force that they wash down rocks and earth, till at length a huge landslip occurs.

At many mines thus worked, a surface of several acres in width and a couple of hundred feet in height is daily washed away. The auriferous dirt and gravel are washed into long sluice-boxes, in the bottom of which is laid quicksilver, to attract the gold.

But the greatest expense of this work is incurred in carrying off the immense mass of *débris*. To do this, it is necessary to secure a rapid fall of ground towards some deep valley or stream; and there are cases, such as that of the Smartsville gold-beds, in which it has been necessary to drive a tunnel through a great hill, perhaps through several thousand feet of hard rock, in order to find an outlet for the raging mud-torrent, which rushes down at racing speed, bearing with it huge rocks, and so finds an outlet in the Yuba river—formerly a clear trout-stream, now a sluggish ditch-like river of red mud.

The coach halted at a big cattle-ranch to water the horses, and the ranch-men brought us a bowl of delicious milk to wash down the stifling dust. They would accept no payment, but gave it with a cheery welcome that made it doubly acceptable. They were fine, strapping, well-to-do, well-clad men, thriving and hearty, proud of their

glorious country of California, and anxious that every stranger should carry away a good impression of it.

A little before noon we reached this town of Sonora, which, though fast decaying, is still the headquarters of mining operations in these parts. Though somewhat dilapidated, it is quite a fair-sized town, and has two large hotels, four churches, schools, restaurants, bar-rooms without number, large shops with fire-proof iron shutters and iron doors. Much money has here been expended; but life has passed by, and these properties are now almost worthless, the houses standing empty—mere skeletons.

The coach rattled up the long, dead-and-alive street which forms the principal feature of the place, and deposited me at a very clean, handsome hotel, where, somewhat to my annoyance, I am compelled to spend a whole day, as, tourists being scarce, the other coach is not to run till to-morrow.

So I have had plenty of time to look about me; and though the place is not beautiful, it is interesting. The surrounding country has all been worked out in surface-mining, but it is not yet thoroughly exhausted, and some lucky men still occasionally hit on a good thing, and contrive to wash out a few thousand dollars. If a travelling circus, or any such delight, finds its way to Sonora, the big lads go out with old pans, and contrive to "pan-out" as much gold-dust as will pay for their admission.

In former days, gold-dust, by weight or by measure, was the medium of exchange for everything. Tobacconists sold an ounce of "negrohead" for "a pinch" of gold-dust

—a mode of payment which was greatly in favour of the man with a large thumb! (By the way, I hear that a favourite singer has been giving concerts at the Temora gold-fields in New South Wales, when the open-handed miners showered on her, not only applause, nor even bouquets, but genuine nuggets, twisted up in bits of paper! Decidedly a useful form of approbation!)

The recent lucky finds of gold have proved fortunate for some of the men who had spent thousands of dollars on building here in prosperous times, and who now cannot sell at any price. In some cases they have found a new source of wealth under their feet, by pulling down their houses, and washing the soil on which they stood. One man, whose store stands in the main street of Sonora, finding he could not sell his property at a fair price, turned his assistants into gold-miners, and, by removing the soil to the depth of perhaps twenty feet, and washing it, they found gold-dust to the value of 4000 dollars. The soil was trapped, so that it could not be washed away, and was then replaced, and the house rebuilt as before!

Just at present, the dying life of Sonora has somewhat revived, in consequence of hopeful operations at "The Confidence Quartz Mine," which is in a mountain about twelve miles from here. For years it was worked at a dead loss by two successive companies, who excavated to the depth of 200 feet, and then finally abandoned it. After a while, a third company started it afresh. This time it appears to be answering the highest expectations,

and is set down as one of those happy exceptions—a successful mine.

So a multitude of eager men are now thronging to seek work at "The Confidence," and the dull streets of Sonora echo the speech of many nationalities. Hard-headed Yankees from the Eastern States; hopeful, reckless Celts from the Emerald Isle, earnest canny ones from Scotland; Cornish men, Kentish men, Portuguese, Norse, Danes, representatives of all nations,—flocking from afar to take their share of hard unlovely toil, digging and delving like moles, in dark, dirty tunnels, all for the chance of gold.

Still, the real inhabitants, such as my landlady, say that the present crowd is hardly worth mentioning, as compared with the busy throng of 1849 and the following years, when on Saturday nights the miners poured in from all their lonely cabins, to buy stores, and bring their week's gain to be despatched to San Francisco in the strong-box of the Express, or, too often, to squander it at the gambling dens or whisky bars. On those nights a procession, more than half a mile long, was formed by eager men, waiting their turn to approach the post-office —that weekly lottery which might perhaps have brought them a letter from some far country which they called home.

The actual residents of Sonora seem rather to like the place. They say it has a good climate; the nights are always cold, however grilling may be the dusty noonday. There are no mosquitoes, and no fevers; and the easy-going life of doing nothing seems a natural reaction from the fiery gold-fever of past years.

Roses and oleanders contrive to blossom beneath a thick coating of dust, and there are very fine vineyards and orchards all round the town. Through these I have been wandering at large unheeded, and should probably have been told "I was heartily welcome" had I helped myself to their treasures. Large fig-trees form the chief feature of the vegetation. They have just done yielding a heavy crop, and a second is due ere long. The grapes are splendid, but are not yet fully ripe.

I must tell you a trifling but characteristic incident of this New World life. As I was coming up to my room (a very smart one), a fine stalwart miner, from Virginia city, came up to his (equally smart). He was in his muddy working-clothes, and carried a big bucket full of magnificent ripe peaches. Of these he insisted on giving me more than I could carry,—and I only hope he enjoyed his own share as thoroughly as I did those he so generously bestowed on a stranger.

In the colonies we are thoroughly familiar with Californian peaches and apricots "canned"; but this was my first introduction to the genuine article, freshly gathered.

CHAPTER XV.

HOT GORGE OF THE STANISLAUS—A SLEEPY COACHMAN—MURPHY'S—A CHILL DRIVE—CALAVERAS—THE FOREST—BIG TREES—RATTLESNAKES—WOODPECKERS AND BLUE JAYS—MAGGOTS—SQUIRRELS—TARANTULAS.

CALAVERAS, *Sunday, July 28th.*

ONCE more I am in paradise—whether in the seventh heaven or in any lower degree I cannot venture to say, but assuredly in the most glorious forest sanctuary that can possibly be conceived.

As a matter of course, the approach to paradise was not altogether delightful. The first part of yesterday's journey was through the same ghastly, denuded, old mining country, the anatomy of the rocks all laid bare in the most unbecoming manner. The heat was grilling, and it really seemed as if poor mother earth were acting on Sydney Smith's suggestion, and had taken off her flesh to sit in her bones.

Presently we came to a vast plain, which in the spring is rich pasture-land, but now can scarcely be recognised

as even sun-dried hay, so entirely does dust triumph—dust like the finest flour, flying in choking clouds, and the road only to be distinguished as a broad track of deeper dust. No shadow anywhere, but overhead a fierce scintillating sun, blazing with sickening heat.

Then we descended by a series of frightfully steep zig-zags into the gorge of the Stanislaus river, where the sun's vertical rays seemed concentrated, for the hot air blowing in our faces was like the blast from a furnace.

At all these fearfully dangerous gradients the drivers invariably whip up their teams of five or six horses—three abreast—and tear down just as fast as they can lay foot to ground. The roads are narrow, with only just room to pass another wheeled vehicle. There is no parapet, not even a fence, to mark the edge, below which lies the steep descent of many hundred feet, to the dark chasm from which rises the tumultuous roar of unseen waters. The parapet would be considered an unnecessary extravagance; it would not pay.

Round these rapid curves and dizzy ledges the six-horse team and heavy coach rattles as cheerily as ever coach ran on the old Highland road—never relaxing pace save when, at some particularly dangerous spot, we encounter heavily laden waggons, drawn by six or eight pair of mules. We met a mule-train coming up the gorge as we descended, and "you bet" I watched breathlessly while the outer wheels grazed within six inches of the precipice, and then rattled on again.

I bethought me of the Great Duke's question to the

trio of coachmen anxious to secure his situation: "How near the edge of a precipice could you venture to drive?" "Within a foot," said the first—"Within six inches," said the second—"Faith, and I'd keep as far from it as possible!" said the successful candidate. I felt to-day that Wellington was the Solomon for mountain drivers.

It is bad enough, even on an ordinary forest-road, to meet a waggon-train of long heavy-wheeled timber-carts, with one man to guide each team of eight or ten mules. He generally sits on one, and guides the others with a single rein, but chiefly by voice, and addressing each by name; he puts on the drag by means of a rope which works an iron lever, and if the road is too narrow to pass, he must pull up in the bush on one side—no easy task.

Well, we dashed full tilt down this breakneck descent, the coachman working the brake with his foot, and talking to his horses in the most calm matter-of-fact way, as if the apparent danger was not worth a thought. (They do sometimes come "an almighty smash"; and when they do so, it is something for the survivors—if there are any—to remember!)

As soon as we had climbed safely up the other side of the furnace-gorge, our driver became so overpowered with sleep, that he was quite unable to keep his eyes open: he confided to us that he had spent the two previous nights at balls, and was quite "used up." Luckily, my fellow-passenger, who was a grocer's agent, proved equal to the occasion; and putting the driver inside to sleep in peace,

he took the ribbons, and drove right well. Moreover, he had to keep up the pace, as we were late, and had to catch another coach at Murphy's, which is a decaying mining town like Sonora, Columbia, Dutch Flat, Copperopolis, and all their mushroom tribe.

At Murphy's we had only just time to change coaches; and then commenced a long steady pull uphill, through a forest of ever-increasing beauty, till we arrived here in a glory that excelleth. Such a forest! of every sort of fir; sugar-pine, yellow pine, cedar, spruce, silver fir, tamarack, &c., &c. They grow larger and more beautiful as we ascend.

But also, as we ascended, the air became more and more bitterly cold, till at last I was truly grateful to the coachman, who insisted on wrapping me up in his big greatcoat, declaring that nothing would induce him to wear it. I believe he must have been half perished, and I felt thankful this morning to see him start all right on the return trip.

It was 10 P.M. ere we arrived at this cosy, clean cottage-hotel, where we were welcomed with true Californian cordiality,—fed, warmed, and comforted.

Need I tell you that the sun had not risen long before I surveyed my surroundings from the pleasant verandah? and the glimpse so obtained was an irresistible summons to go forth to nature's early service, in a grander cathedral than ever was devised by human architect!

This house stands on rising ground, in a small glade in the very heart of the most glorious forest, on the edge of

perhaps the grandest existing grove of the Giant Sequoia. These stand singly, or in groups, like tall towers, and the colour of their thick, soft bark is such a rich golden red, or warm sienna, that when the light falls on them, they look like pillars of fire. These giants are scattered among thousands of other grand pines and cedars, with grey, white, red, or yellow stems, all faultlessly perpendicular, while from their drooping boughs hang long waving draperies of the loveliest bright yellow lichen, like rays of sunlight. You may remember my describing it to you at Mariposa, where I first made acquaintance with the Big trees. But then the forest lay deep in snow—a very different scene from this joyous summer, with all its treasures of delight.

I think I must also have told you how strange it is that most of these great monsters have only little insignificant branches near the summit. But the lower trees throw out graceful boughs which make a cloud of soft grey-green about the red stems, and make them look quite comfortably clothed; and down about their feet grow hazel-bushes covered with nuts, to the endless joy of the merry squirrels.

I found one glade in the forest, which seemed to me, above all others, suggestive of a glorious natural cathedral —the mighty stems forming long, dreamy aisles. At one glance I could count twenty of the huge red columns, which, seen in their own gloom, against the light, are of a dark maroon colour like porphyry; while the lesser shafts of grey, red, and yellow, grouped themselves like

pillars of many-coloured marbles, grey granite, and sienna.

And the eastern light, streaming through the silvery grey-green of the pines, or the mellow golden-green of the hazel undergrowth, became subdued, just as it is in very old churches with greenish glass. It was altogether beautiful, and so solemn and still; not a sound to be heard, save the chirruping of insects, and a few low bird-notes—not a full chorus, but a subdued under-tone.

Now I am going off to spend a long day by myself in the glorious forest. I only wish you could be here to enjoy it all with me.

THE "FATHER OF THE FOREST,"
Friday, 2d August.

They say that "familiarity breeds contempt," but assuredly there are exceptions where it tends to deeper reverence, and foremost amongst such rank these monarchs of the forest. I know that at first I could not understand them—now, day by day, I can better realise their majesty.

From the very fact that *all* the trees are so large, one fails to realise the magnitude of the giants. All have increased in proportion. It is as if, having looked at a European forest through the wrong end of your opera-glasses, you suddenly turn them, and lo! you behold a Californian forest; but it requires a mental calculation to convince yourself that the transformation is something

quite out of the common—in short, that, like Gulliver, you have passed from Lilliput to Brobdingnag.

It is only when you come to walk in and out of hollow trees, and to circle round them, and take a constitutional by walking alongside of a fallen giant, or perhaps (if it has done duty as a chimney before it came to grief) by riding inside the hollow for a considerable distance, that you begin to understand their size. You do so best when, standing on the ground beside a prostrate tree, half buried in a ditch of its own forming, you look up at a red wall, rising perhaps fifteen or twenty feet above your head, bulging outwards considerably, and extending in a straight line for 300 feet along the ground, and tell yourself that it is only a tree!

The owners of the forest, who carefully preserve this grove for the enjoyment of all the world, have erected tall ladders, to enable people to climb on to some of these heights, and walk along the fallen trees as if on garden terraces. It sounds Cockney, but it is pleasant. It is not every one who could scale these red ramparts without the aid of a ladder, and you gain a much finer view of the surrounding forest from an elevation of twenty or thirty feet; while, by clambering among the upturned roots of some deposed monarch, you may perch yourself some forty feet in the air, as I am at the present time.

I am snugly ensconced among the roots of the poor old Father of the Forest, a gigantic ruin, which perchance may have been a brave sapling in the days when "there were giants" on the young earth, and which little dreamt that

in this nineteenth century a pale pigmy from a distant barbaric isle would be nestling among its roots, and using them as a writing-table!

By the most moderate computation, this forest-monarch must have survived the changes and chances of three thousand years! Mr Muir made a most careful calculation of the annular rings of a fallen tree, which was sawed across at four feet from the ground. It measured 107 feet in circumference *inside the bark*. The outer part of the trunk is so very close-grained that he counted thirty annular rings to the inch. Had this proportion been uniform throughout, it would have proved the age of the tree to be 6400 years. The central rings were, however, about twice the width of those formed by the aged tree, so he made a very liberal allowance, and set down the probable age at 3500 years!

One of the most remarkable points connected with these huge trees, is the extraordinarily small root which forms the pedestal for so ponderous a weight,—small comparatively, with little spread, and literally no depth—merely a superficial hold on the earth's surface.

As I look on the interlacing roots which form my cedar-wood bowers, and then let my eye travel along the vast stem till it loses itself in the forest, forming a broad roadway, along which (were it but level) two carriages could run with ease, it does appear a mystery passing strange how so slight a support can have enabled so huge a body to resist the wild storms of so many centuries.

It is estimated that this tree must, when perfect, have

been about 450 feet in height! Now its summit is decayed, but what remains is like a long mountain; and two large archways have been cut into the side of the said mountain, in order that those whose taste lies in that line may ride into the hollow trunk and come out by the farther opening. Only think what a majestic tree this must have been, rising perpendicular for 210 feet ere throwing out one branch! It was broken in falling, but a straight column of 300 feet in length remains, and measures eighteen feet in circumference at the point of fracture.

There are many such tree-terraces lying about the forest, and their soft red bark forms a pleasant footpath; but only those with the Cockney ladders are accessible to me! The said bark is a most curious fibrous material, like rich sienna-coloured furniture-velvet, about eighteen inches thick. Small blocks of it can be bought at the hotel, as memorial pin-cushions. Happily this grove, and all that is in it, is held sacred,—so relic-worshippers are supplied from more distant trees. From the extremely porous nature of this bark, it appears probable that it may in some measure act the part of lungs to the huge tree, which surely could scarcely find sufficient breathing-power in the scanty foliage which adorns its lofty summit.

All the Big trees of this district are concentrated in two groves,—this little forest-gem of Calaveras, and a much larger belt, known as the South Park Grove, on the Stanislaus river, about six miles from here. I hope to find my way there to-morrow.

In this Calaveras grove all the Sequoias lie within an

area of fifty acres, over which space altogether about a hundred lie scattered singly or in groups. Of these, twenty attain a circumference of about 80 feet near the base, and this portly old "Father" is found to measure 110 feet round. Of the trees now standing, five exceed 300 feet in height, and one measures 327. About twenty-five are said to exceed 250 feet in height. The "Mother of the Forest" is 321 feet high, and 90 feet in circumference. Truly a portly dame![1]

I cannot imagine that these dry figures convey anything to your mind; so I had better give you a few simple facts, —such as, that many of these hollowed trees have been used as camps by explorers. There is one, called Pioneers' Cabin, which is 300 feet in height, and measures 90 feet round five feet above the ground. It has been hollowed

[1] Though there is every probability that the Sequoia will maintain its supremacy as the most massive column in the world's forests, it must perforce yield the palm of altitude to the Australian Eucalyptus. In the valley of the Watts River, in Victoria, many fallen trees have been measured as they lie on the ground, and found to exceed 350 feet in length. One mighty giant had fallen so as to form a bridge across a deep ravine. It had been broken in falling, but the portion which remained intact measured 435 feet in length; and as its girth at the point of fracture is nine feet, its discoverer estimated that the perfect tree must have measured fully 500 feet! Its circumference five feet above the roots is fifty-four feet.

In the Dandenong district of Victoria an almond-leaf gum-tree (*Eucalyptus amygdalina*) has been carefully measured, and is found to be 430 feet. It attains a height of 380 feet before throwing out a branch. Its circumference is sixty feet.

Tasmania also produces specimens of Eucalyptus of 350 feet in height, and which rise 200 feet ere forming a branch. One near Hobart Town is eighty-six feet in girth, and till ten years ago towered to a height of 300 feet, but is now a ruin.

by fire, forming a dark cavern, in which fifty persons can find sitting room! Some have been used for stabling horses; and there is one, called "Burnt Tree," which lies prostrate on the ground, and measures 330 feet. It was so hollowed by fire that it became a mere chimney, and now those who fancy going through charcoal tunnels can ride in at one opening and out at another, a distance of sixty feet!

Soon after this grove was discovered, some Goths determined to make known its glories by distributing sections of wood and of bark to various parts of the world. To this end, one of the noblest trees was felled,—an operation which kept five men hard at work for twenty-two days, boring through the tree with pump-augers. Even after the poor giant had been sawn in two, it refused to fall, and its murderers had to work for three days more, driving in wedges on one side, till they succeeded in tilting it over; and great was the fall of it. Then they smoothed the poor stump, at six feet above the ground, removed its bark, and built a pavilion over it, in which a party of thirty-two persons found room to dance,—not a savage war-dance over the mighty, conquered monarch, but commonplace quadrilles, with attendant musicians and spectators, all crowded into this novel ball-room. Its diameter is twenty-four feet, and its age, reckoned by the rings of annual growth, is found to be about 1300 years.

More barbarous still was the fate reserved for the venerable Mother of the Forest, which is the tallest tree in the grove—327 feet in height, and which attains to 137 feet

before throwing out a branch. She was sacrilegiously stripped of her warm plush coat (Sequoia bark is really very like coarse furniture-velvet, and, moreover, is about eighteen inches thick). To the height of 116 feet from the base, the bark was removed in sections, each duly numbered, in order to be rebuilt and exhibited in various places. Unbelieving sight-seers supposed the huge erection to be a fraud, made up of many trees. Finally, it was taken to the Crystal Palace at Sydenham, where it was unfortunately destroyed in the great fire. Strange to say, though the poor tree was thus ruthlessly dealt with in the year 1854, she is still alive, though naked and miserable. I can see her from where I now sit—a ghastly object—her sides still transfixed with wooden implements of torture, —the St Sebastian of the forest. So I look in the opposite direction, where, on either hand, tower magnificent groups, like stately obelisks of burnished sienna, with leafy background of green and gold, fading away in dream-like forest-glades, through which the breeze floats fitfully, with low faint moaning.

I spoke unadvisedly in calling these huge stems "obelisks." They are true columns—fluted columns, for the bark is deeply grooved with long vertical indentations, which produce just the effect of fluting. These majestic columns rise 200 feet ere throwing out a branch, and then only small stems, which support a leafy capital.

If you had ever seen the Kootub Minar—the colossal red sandstone minaret in Old Delhi—I could best compare them to it; for not only has it just such flutings as these

trees, but it also expands considerably towards the base. So do these tall minarets—in fact, they are almost shaped like a funnel at the base; hence the very varied measurements given by different writers, some taking the circumference at their own height from the ground, while others measure scientifically at a height of twelve or fifteen feet, from which height upwards the diminution is imperceptible.

There is one little detail which savours unpleasantly of Cockneyism—namely, that every Sequoia in this grove has received a distinctive name, which in some cases is engraved on a granite tablet, and inserted in the bark. I do not dislike such names as "Pride of the Forest," "The Beauty of the Forest," "The Knight of the Forest," "Queen, and her Maids of Honour"; nor do "Hercules," "The Twins," "The Hermit," "The Fallen Monarch," or "Mother and Son," sound amiss. There is something characteristic in such names as "The Granite State," "Old Republican," "Old Dominion," "Brother Jonathan."

No one can grudge the dedication of a special tree to "Old Dowd," the discoverer of the grove, who was supposed to be telling such "tall" stories, that he had to invent a real "tall" grizzly bear before he could induce his comrades to accompany him to Calaveras. Every one must acknowledge that "George Washington" is well named, and possibly the ever-green memory of some great naturalists is happily commemorated. But why every tree must be alike nicknamed in honour of minor mortals of exceedingly varied merit is a mystery to the mere lover of beautiful nature.

"One tree is happily dedicated to William Cullen Bryant, whose words are inscribed on a marble tablet—

"THE GROVES WERE GOD'S FIRST TEMPLE."

One of the loveliest groups is known as "The Three Graces"; they seem to spring from one root, and tapering symmetrically upward, tower side by side to a height of 290 feet, their united circumference being about 95 feet. The "Two Guardsmen" are each 300 feet in height, and respectively 65 and 70 feet in circumference. These stand sentinel at the entrance to this wonderful forest.

But there is no use in attempting to paint such a place in words. All the thousand details that go to make it a scene of enchantment are indescribable. You must imagine for yourself the drowsy hum of bees and other insects, the flash of blue jays, an occasional glimpse of a humming-bird, hovering for a few seconds, then vanishing, or a flight of butterflies, a heavy-winged moth, the aromatic fragrance of pine and cypress and cedar, all mingling

"Like sweet thoughts in a dream,"

and imparting a soothing sense of calm content, which makes mere existence a joy. I am sure the very breath of these resinous pine-forests is balmy and health-giving, and I do not wonder that your favourite fir-tree oil is credited with such wondrous powers of healing.[1]

[1] It is much to be regretted that the curative properties of fir-oil are not more widely known. The oil prepared in the forests of Germany has been found invaluable for external use in the cure of rheumatism, and of obstinate coughs and kindred maladies.

In England, the Sanitas Oil Company, who adopt a fir-tree as their

I certainly enjoy this existence to the full, generally breakfasting at daybreak, and then starting for the day, carrying luncheon and a bottle of rich creamy milk, which I hide in some lovely nook, to which I can find my way back at my leisure, and meanwhile go off exploring—not, however, without keeping my eyes open, for there are a good many rattlesnakes about, and I have "happened" on several, especially one which was curled up under this very tree, in a hollow, where I often hide my drawing-

trade-mark, now offer us various preparations for the cleansing of wounds, purifying of all unclean things and places, and for disinfecting purposes in general. Among the manifold forms in which this fir essence appears, are oil, soap, fluid, tooth-powder, nursery powder, ointment, &c. The only objection to the use of these is the overpowering smell of turpentine which seems to cling for ever to any object to which they have been applied—a clean smell certainly, but lacking the charm of the breath of the great coniferous forests.

One of the valuable purposes to which fir-tree oil has been successfully applied is in the destruction of blight, scale, green-fly, and all manner of insects on garden plants. As an experiment on a small scale, mix a table-spoonful of either German fir-oil or Sanitas in a tumbler of warm water, and therewith sponge the leaves and branches. Leave this to dry, and a few hours later syringe the plant with tepid water, when all animal life will be found to be extinct. For more general use, lay the plants on their side over a tub, and syringe the whole, but especially the under side of the leaves, with a preparation of half a pint of fir-oil to a gallon of water. When this has well dried, drench the plants thoroughly, and the insect pest will assuredly perish.

For soft-wooded and woolly-leaved plants, the preparation should be much weaker than for those with hard wood and shiny leaves. In the case of vines and fruit-trees which have been attacked by blight, it is recommended to follow up the preliminary washing by a coat of ointment made of fir-oil, sulphur, and soft-soap, mixed with clay—warranted a sure insecticide.

blocks. I can tell you I slipped them in quick and went off, leaving the snake on guard. He was faithless to his charge, however, for when I came back next morning he was gone.

My only noisy companions are the woodpeckers,[1] who, with their hard, sharp beak, drill deep holes all over the pine-trees; sometimes there are so many of them, all tap, tap, tapping, that you would think there must surely be carpenters working in the forest. I have seen trees with hundreds of holes in them, pierced to the depth of a couple of inches, till they are literally like a honeycomb —each hole bored as neatly as if it had been made by a joiner's auger.

As fast as they are made, the woodpeckers and their partners, the blue jays, carefully deposit an acorn in each hole as their winter store, always with the point turned inwards, and the flat base just closes the opening. The careful woodpecker always selects one which exactly fits the hole, while the less tidy blue jay drops in the first he finds, whether it fits or not. Some of these acorns breed worms and some do not; so then the two birds divide the store, the woodpeckers eating the worms, while their friends get the sound acorns. Here you have a true co-operative society in the forest.

One day, while I was sitting quite still, a pair of woodpeckers came and hunted a dead tree beside me. First, Mrs Woodpecker walked up, closely followed by her husband (with his dandy scarlet cap). She went on very

[1] *Melanerpes formicivorus.*

quickly, tapping the bark, where I could see nothing. But every minute she pulled out a fat white maggot, of which she swallowed half, and gave her husband half, like a dutiful wife. Then, when she was tired, he went first, and shared his bag with her in the same way.

This maggot is another creature which bores holes in timber, but which seems never to attack healthy trees, or, indeed, living trees. But so soon as one falls, or begins to decay, or is half burnt by a forest fire, then the pine-borer[1] finds it out, and lays its eggs beneath the bark. It is an ugly grub about two inches long, and a quarter of an inch thick, with a proboscis very like an auger—a capital tool which never seems to get blunt, for with it this diligent workman bores its way right through any large timber. If you listen attentively as you sit near some great fallen tree, you can distinctly hear him mining and tunnelling in the heart of the wood.

Here he is left to work undisturbed; for luckily, though this beautiful forest has not been reserved as national property, it is most carefully preserved by men who appreciate its unique beauty, and will never suffer these grand trees to be cut down to make railway sleepers or to build log-huts. But in districts where trees are only valued as so much timber, and good logs and planks are worth so many dollars, there this little grub is a very serious enemy; and so, as soon as a tree is blown over or half burnt, if the lumberers consider it worth saving, they take care to strip off its bark before the spring, that their enemy may be

[1] *Pissodes strobi.*

deprived of this nice dry nest wherein to deposit the eggs, which would so quickly produce a large able-bodied family of destructive borers.

Here, as usual, my merriest friends are the mischievous little squirrels, always full of fun and frolic, busily nibbling pine-cones, or nutting in the hazel thickets. The whole country swarms with them. There are various grey squirrels, but my especial companions are the chipmunks —such jolly little beasts! On the highest points of the bleak, cold granite mountains, they whisk about, apparently quite as happy as their cousins in these beautiful forests. They are the sauciest little things imaginable.

Yesterday a couple came close to me as I was sketching under a big tree. I sat very still, for fear of frightening them; but I need not have taken that precaution, for they did not mind me a bit. In fact they were very angry at my staying there, and one of them sat on the side of the tree chattering at me, whistling and dancing, till I got tired of its noise, and threw a cone at it. It merely dodged round the tree and fetched its wife, and then the two together sat and scolded me furiously. They made such a noise that it became very tiresome indeed, so I threw several cones at them; but they were always too quick for me, and I had to put up with their chatter for more than an hour, after which they got tired and went away—much to my satisfaction.

Seriously (and not without good cause) as our British foresters object to the mischief done by squirrels in nibbling and breaking off the young shoots of growing timber,

it cannot be denied that they are useful helpers as nurserymen, and constantly practise Sir Walter Scott's great maxim, "Aye be stickin' in a tree."

For they are most provident little people, and, while enjoying their full share of good things in the present, do not fail to lay up abundant stores for wintry days. They establish subterranean granaries, in which they conceal all manner of nuts and seeds; and as they are always busy either eating or storing, they contrive in the course of the autumn to conceal ten times more material than they ever require.

So these carefully buried seeds spring up, and become the nurslings of the forest. Or, in the open country, they grow up singly, where they have room to expand; and there is no doubt that many of the noblest trees which give beauty to the land owe their existence to the provident instincts of these wise little folk.[1]

Well would it be for California if her human inhabitants would give some heed to the future of her timber, instead of so ruthlessly destroying it to meet the requirements of the moment. One of the trees which suffers most severely at their hands is the noble chestnut-oak, the bark of which is found to be admirably adapted for tanning

[1] Squirrels are not nature's only good nurserymen. Rooks are equally useful, from their habit of burying both fir-cones and acorns for future use. An authentic instance of this is mentioned in a 'Natural History of Westmoreland and Cumberland,' published in 1709, in which the author, Mr Robinson, tells how he watched "a flock of crows" planting acorns; and how, a quarter of a century later, he found that these acorns had produced a grove of oaks, tall enough for crows to build in.

leather. So the beautiful growth of centuries is sacrificed to the manufacture of boots and saddles, and whole districts are denuded of their fine old trees, which are cut down wholesale, solely for the sake of their bark, which is peeled off, and the poor stripped trunks (which truly have fallen among thieves) are left lying on the ground to rot. Already the havoc done has been so great as to forebode the total destruction of one of the handsomest indigenous trees.

To-day an Indian boy offered me for sale some beautiful specimens of the strange nest of the tarantula spider,—or rather, of the trap-door spider, which is so called in this country. It is a wonderfully ingenious architect, and displays amazing skill and patience in contriving and constructing its home, which, in truth, is a fortress, with a strong door to keep out all besiegers.

The nest is a little well of clay, sunk in some earthy bank, just large enough to admit an average-sized human thumb. The interior is smoothly polished, but the tarantula is not content with bare plastered walls. She is a diligent worker, ever weaving dainty fabrics; so she lines her home with a double curtain,—a hanging of coarse spider-cloth next the wall, and over that a rich white satin material, smooth and glossy.

The well-like nest is almost invariably tunnelled into the side of a sloping bank. It is closed by a circular door, fastened at the upper side by a most ingenious hinge. It opens outward, so that when the spider goes out the door falls into its place and closes of its own accord, fitting so

closely into the rim of the nest, and covering it so neatly, that no foe would ever notice the little disc in the earthen bank, which is the only trace of the tarantula's home. But, to make assurance doubly sure, the wary spider provides means to secure it on the inside. At the side farthest from the hinge it leaves several small holes in the disc, and by clinging to these with its claws, it keeps the door tightly closed from the inside, so that no enemy can enter.

The door is in itself a marvellous contrivance, and a monument of patient ingenuity. Though barely the eighth of an inch in thickness, it is composed of thirty triple layers, each consisting of a coating of clay, lined with two ply of spider-cloth similar to the tapestry within the nest. These ninety layers are all fastened together, making a solid door, which is largest on the outside, and fits into a groove, so that it closes quite tight. I suppose sufficient air for breathing purposes comes in at the keyholes.

The enemy against which this spider defends itself so securely is a yellow-winged dragon-fly, which darts upon the spider, stabs and devours it, and even endeavours to scratch open the closed door behind which its prey has retreated.

I have seen very few Indians in this part of the country, but there are several parties of white campers, who have come up from the dusty plains to lay in stores of health, and who seem to be thoroughly enjoying their gipsy lives.

CHAPTER XVI.

THE FORESTS OF THE SIERRAS—PINUS LAMBERTIANA—ABIES WILLIAMSONII, ABIES DOUGLASII—PICEA AMABILIS, PICEA GRANDIS—PINUS MONTICOLA, PINUS PONDEROSA, PINUS CONTORTA, PINUS TUBERCULATA.

It strikes me that, while I have told you a good deal about Sequoias, I have never said a word about all the other noble and beautiful pines, firs, spruces, and cedars which compose nineteen-twentieths of these glorious forests, and which, each by turn, so fascinate me, that I never can decide which is most majestic.

They were beautiful in the early spring, when tipped with light-green shoots; and some, such as the Silver Spruce, were powdered over with a bluish bloom. But they are more beautiful now, when bending beneath the weight of their wealth of ripening cones,—of all sizes, from the little round cedar-cone to the splendid cone of the sugar-pine.[1]

The stately Sugar-Pine, true queen of the Sierras! Whatever claims to masculine grandeur any other trees may

[1] *Pinus Lambertiana.*

possess, she at least stands unrivalled in grace and loveliness. I never see one of these tall, smooth, tapering shafts, —reaching up to the blue heaven, and thence outstretching its crown of long, slender branches—clothed in tender green, and expanding in faultless symmetrical curves,— without receiving the same sort of impression as (alas, how rarely!) is derived from the presence of a gracious and lovely woman.

Even the youngest sugar-pines are things of beauty— fair daughters of a noble house—and full of the promise of ever-increasing loveliness, when (after a strictly well-regulated youth of some sixty years, during which they adhere to the conventional forms of graceful, lady-like young sugar-pines) they may begin to strike out an independent line of their own, and in the course of three or four hundred years, when they have attained a height of about two hundred feet, and a girth of from eighteen to twenty feet, may boldly venture to throw out free irregular branches forty or fifty feet in length, sweeping in most graceful curves, and rarely dividing into secondary boughs unless just at the extreme tip, where perhaps a delicate branchlet may diverge from the main arm.

Each branch is fringed with tassels of long fine needles; and from the tips of these slender pensile boughs hang the most beautiful cones that exist in the whole pine kingdom, —cones which are rarely less than fifteen, and often grow to eighteen inches in length, averaging nine inches in circumference. They act as weights to draw down the tips of the branches.

As the cones attain maturity, their delicate green changes to a rich purply hue, and then to a golden brown, which becomes yellowish as the opening scales reveal their inner sides; and long after the wingëd seeds have flown from their snug niches in the core, these rich golden cones still cling to the boughs, and mingle their mellow colouring with the green crop of the following year. But the sweet sunlit grass is all strewn with the great yellow cones which in former years have dropped to the ground, but seem in no hurry to decay.

They ripen in September, when the seeds are carefully collected by men, who have found them to be a profitable article of trade, for the pine-growers of distant lands. But the pine-growers of Britain are unable to supply the altitude most dear to the sugar-pine, ranging from 3000 to 7000 feet; and moreover, many a generation will come and go ere artificially reared trees can hope to approach the natural beauty of these free children of the mountains, some of which (with a circumference of about thirty-five feet) are supposed to have already braved six hundred winters, yet show no symptom of decay, nor any reason why they should not survive six hundred more, if only they can escape the ruthless saw of the lumberer, or the still more cruel axe of the shingle-splitter.

Unfortunately, the wood splits so readily that it finds especial favour with these men, to whom a tree represents only so many cubic feet of timber; and so the loveliest creations of nature are hewn down, solely to be reduced to shingles for building and roofing the most abject of huts.

But where this sad fate has been averted, the majestic tree still reigns supreme,—a queen without a rival.

Its warm brown stem is generally studded with golden lichen, which also hangs in long beard-like fringes from every bough. And not only do the pine-needles fill the air with resiny fragrance, but the wood itself has a pleasant smell,—chiefly perceptible, alas! when the wood-cutter has sealed its doom.

The generous tree not only perfumes the clothes of the destroyer, but also gives him delicious white sugar, which, by many persons, is preferred to that of the sugar-maple. Wherever the tree is wounded, either by fire or axe, there the sweet sap exudes, like the gum on our own cherry-trees. Though naturally white, it so often flows from a wound charred by fire, that it is apt to assume a rich golden colour, like barley-sugar. Though pleasant to the taste, it cannot be eaten with impunity by all persons, being somewhat medicinal in its effects. It is curious that the bears, which have so keen a talent for scenting out honey and other sweet things, seem to avoid this natural sugar by instinct, and are never known to touch it; but it is said to be useful as a cough-lozenge, and a remedy in lung disease.

Next in beauty to the sugar-pine, I think I must rank the Williamson Spruce.[1] Indeed, Mr John Muir, whose loving reverence for the Sierras, and intimate acquaintance with every tree that grows here, entitles him to a strong vote, gives it the place of honour above all others. He

[1] *Abies Williamsonii.*

considers it more delicate in its beauty and more enduring in its strength than any of its graceful kindred—in short, he declares it to be the very loveliest tree in the forests.

It is not so luxuriant in growth as many others—rarely, if ever, exceeding a hundred feet in height, and from four to five feet in diameter. Yet while it possesses all the elegance and delicate curves of the sugar-pine, it has strength to withstand the rudest storms, and grows best on frosty northern slopes, at an altitude of 6000 to 8000 feet, where the snow lies so deep in winter as altogether to bury it. For so gently does this yielding tree droop beneath the gradually increasing weight of snow, that not only the boughs, but even the slender main stem bends like a reed, till it forms a perfect arch; and as the snow falls deeper and deeper, the whole grove is literally buried —not an indication of a tree-top is to be seen.

Thus sheltered from the wintry blasts, this graceful spruce lies hidden till the return of warm spring melts the frozen snows, and the long-prisoned boughs, elastic as before, spring back to their accustomed position, and the beautiful tree reappears as fresh and green as ever, having thus survived the long winter without the loss of one slender branchlet or one drooping cone. Its cones are small, not more than two inches in length, and of a purple colour.

Large groves of the Williamsonii are found on all the higher ranges, and Mr Muir tells of lovely groups which have rejoiced him while exploring the sources of the main

streams of the Sierras—the Merced, the San Joaquin, and the Tuolumne rivers.

Very beautiful, too, is the Douglas Spruce,[1] which, like the sugar-pine, attains a height of 200 feet, and a circumference of from 20 to 25 feet. It looked its best in the early summer, when each spray was edged with a fringe of lovely fresh yellow-green needles, seeming as if the sunlight were flickering among its branches. There are some beautiful specimens of this spruce in the Yō-semité.

Two of the loveliest trees of the Sierras are those silver firs which botanists distinguish as the "Lovely" and the "Grand,"[2] but which, to the Californians, are simply Red Fir and White Fir, from the general colouring of their stem. Both species grow to a height of about 200 feet, in tall, beautifully tapering spires. Some even overtop their fellows by an additional 40 or 50 feet, and the stems attain to a circumference of from 15 to 20 feet. The white fir bears greyish cones about four inches in length, which it carries upright; whereas those of the red fir are of a bronzed-purple tint. They are about six inches in length, and adorn the upper and under side of the boughs with equal impartiality.

The average lifetime of these noble trees is estimated at from two hundred to two hundred and fifty years. Wherever they find a desirable situation and suitable soil on ancient moraines, there they flourish, forming lovely groves even at a height of 7000 or 8000 feet above the sea.

These, however, are but as it were children among the

[1] *Abies Douglasii.* [2] *Picea amabilis* and *Picea grandis.*

trees of the Sierras, some of which, such as the Mountain Pine,[1] weather a thousand years, and attain their greatest perfection at an elevation of 10,000 feet. More beautiful, and quite as hardy as the mountain pine, is the Yellow Pine, which is also called the Silver Pine,[2] and which is the Mark Tapley of the Sierras. No matter how bare the rock-ledge, or how unsheltered the spot, on the bleakest crags, 8000 feet above the sea, it contrives to exist, and rears a brave evergreen head: though dwarfed and stunted, it is always eminently picturesque, throwing out gnarled and twisted boughs. Through long centuries these much-enduring trees have done ceaseless battle with adverse circumstances, struggling with the ungenial rock for a niggardly subsistence, and battered by the winds and tempests.

But while bravely making the best of difficulties, no tree more fully appreciates the good things of life, as shown by its luxuriant growth when living a cheery family life with its brethren in the forests, on good nutritious soil, and in an equable climate. Under these favourable circumstances it becomes almost as majestic as the Williamsonii or the Lambertiana. It covers a very large range of elevation, extending over plains considerably less than 2000 feet above the sea; but its favourite homes are in such sheltered valleys as the Yō-semité, where it is seen in perfection.

It receives its name of silver pine because of the silvery gleam of its glossy needles, on which the sunbeams play

[1] *Pinus monticolo.* [2] *Pinus ponderosa.*

in ten thousand shimmering points of light. Yet the name of yellow pine is more truly descriptive of the tree, whose needles are actually of a warm golden green, and its bark a reddish yellow. The latter is several inches thick, and is laid on in scales like armour. It is generally pierced by innumerable holes, drilled by the diligent woodpecker as store-houses for his winter supply of acorns. Its purplish-green cones are about four inches long, and grow in clusters among tassels of long, firm needles, each six or eight inches in length.

A full-grown Yellow Pine averages 200 feet in height and 18 in circumference, occasionally attaining to 25 feet in girth. It shoots heavenward as straight as a mast, and is, alas! greatly prized by the lumberers. Wherever a yellow pine stands alone on good soil, and with room to expand, its boughs feather down to the ground most gracefully; but, in general, the lower part of the stem is bare, and only the upper half forms a green spire.

One marked difference between this beautiful tree and the lovely Sugar-Pine is, that whereas the graceful branches of the latter sweep in undivided lines for thirty or forty feet, each bough of the yellow pine is divided and subdivided over and over again, forming a bushy tree.

To me the most uninteresting tree of the forest is the Tamarack Pine,[1] sometimes called the two-leaved pine, from the peculiar growth of its needles, which are set in long tassels, bearing clusters of small cones, which in the spring-time are of a rich crimson hue—an ornamental

[1] *Pinus contorta.*

feature, which, however, does not compensate for the sparseness of the foliage. It is a small pine compared with its neighbours, full-grown trees averaging fifty feet in height, and seven feet in circumference. Each tree is a slim, tapering spire, and a large grove affords little or no variety of form; only where the trees grow close together in sheltered hollows, they assume an exceedingly slender character.

The Tamarack overspreads large districts in the higher ranges, flourishing at a height of 9000 feet. Its presence appears to be favourable to the growth of succulent grasses, and the tamarack groves are dear to the shepherd, who therein finds the sweetest pastures for his flocks. They have the disadvantage, however, of being exceedingly liable to be swept by forest-fires, owing to the large quantity of resin which drips all over the bark; so that when, in the seasons of drought, a chance spark falls among the sun-dried cones and needles, and so runs along the ground to the foot of one of these resin-sprinkled trees, it straightway ignites, and in a moment the column of flame rushes up, only pausing, however, to consume the sap. For a few short seconds the beautiful pyramid of rose-tinted flame envelops the tree, then fades away, and passes on to enfold another and yet another in its deadly embrace; for though the fire runs on so swiftly that the trees are scarcely charred and not a twig burnt, they die all the same, and after a while their bark peels off, and the poor naked, bleached trees remain standing intact,—a weird, ghostly forest. In course of years the boughs drop

off, and wind and storm gradually complete the work of destruction.

More provident with regard to fires is the little Hickory Pine,[1] so called by the miners on account of the hardness and white colour of its wood. It is only found in certain localities on the lower hills, at an elevation of less than 3000 feet. It is a graceful little tree, rarely exceeding forty feet in height and one foot in diameter. Its branches are curved and slender, and its grey needles grow so sparsely as to cast little shadow.

Its peculiarity lies in the fact that its hard, glossy cones—or burs, as they are here called—grow in circles right up the main trunk and along the principal branches, instead of clustering on the lesser boughs. Stranger still is the fact that these cones never drop off till the tree dies, but adhere to the parent stem, accumulating an ever-increasing store of ripe seed.

Consequently, no young trees are ever found near a flourishing grove. Mr John Muir, who is an excellent authority on all these matters, has observed that wherever this strange pine exists, all the trees in a grove are of the same age, which he attributes to the fact that, as they invariably grow on dry hillsides clothed with inflammable scrub, which is liable to be swept by fire, the groves are periodically burnt, and with them all the cones borne by these trees throughout the whole course of their existence. Multitudes of these are merely charred, and the action of heat only bursts the hard scales, and leaves

[1] *Pinus tuberculata.*

the seed free to sprout so soon as the ground cools and the rains moisten the soil. Thus, phœnix-like, a new forest springs into being so soon as the parent trees have been consumed.

These are some of the principal trees in the forests of the Sierras. I have spoken of others in writing from Yō-semité.[1]

[1] In chapter iv. I had occasion to refer to the incense-cedar, *Libocedrus decurrens;* in chapter vii. to the nut-bearing pines, *Pinus Sabiniana* and *Pinus Fremontiana;* and in chapter ix. to *Pinus Jeffreyi*, *Pinus Douglasii*, and *Juniperus occidentalis.*

CHAPTER XVII.

IN THE SOUTH GROVE—GIANT TREES—HAPPY HUNTING-GROUNDS IN SOUTHERN CALIFORNIA—MURPHY'S—VIGILANCE COMMITTEES—BILL FOSDICK'S FAILING.

CALAVERAS, *July 3d.*

I HAVE just returned from an enchanting expedition to the great South Grove, which lies along the Stanislaus river and the Beaver Creek, about six miles from here. It is the largest Big Tree colony which has yet been discovered, 1300 Sequoias of over one foot in diameter having been counted in a belt of forest about three miles in length, by two in width.

I found here two American girls, who had come alone, about 3000 miles, from Boston and Detroit, to see the lions of California; so we agreed to ride over together, escorted by "Mike," a Franco-German guide. We followed a beautiful but very steep trail, up high ridges and down into deep gorges, commanding ever-varying views, and at every turn we became more and more deeply impressed with the indescribable grandeur of these

glorious coniferous forests—the vast, beautiful wilderness, where rarely a human ear catches the murmur of the lullabies which winds and rushing rivers sing ceaselessly to the mountains and pine-forests.

Tall green spires crown every ridge, and rise in clusters from the lower levels: grand trees of larch-like growth, middle-aged, hoary, dead; some lightning-stricken, standing ghastly and bleached — some lying prostrate, half buried in moss, and veiled by a rich undergrowth of aspen, dwarf spruce, and cotton-wood.

We rode past tall sugar-pines, so exquisite in their elegance that I could have lingered beside them for hours; but of course the one aim and object of our pilgrimage was to visit the biggest trees, and we certainly have seen giants! We all rode into one hollow tree (a burnt hollow, as usual) in which there is room for seventeen horsemen to take refuge with their beasts. I sketched another which measures 120 feet in circumference. If you will take the trouble to measure a string of that length, and peg out a circle on the lawn, it will give you some notion of how large a very old Sequoia really is. (There is one about fifteen feet larger than this in Southern California!)

Several of the grandest trees have been blown over—not recently, but in some terrific tempest long ages ago. One of these is called Goliath. In falling, it sank into the earth for a depth of fully four feet; and yet, as I rode alongside of it, though I was on a very tall horse, my head did not reach half-way up the side of the stem. Some one measured it about 150 feet from the root, and found it was

45 feet round even there. So he could have cut out a sound block of wellnigh imperishable wood 15 feet square by 150 feet long! Only think how many centuries it must have taken to grow!

We remarked, with much wonder, how very few young Sequoias seem to be growing up; and I am told that throughout the northern forests the same thing has been observed, and that many of the old trees are childless. It is almost feared that in these groves the species is doomed to extinction.

In the southern belts, however, the young trees grow heartily everywhere, multitudes of seedlings and saplings springing up alike in rich moist meadows and on rocky ledges and moraines. So there, the danger of extinction lies not in natural causes, but in the ravages of the sheep-feeders and lumberers, who not only cut the young timber, but, when clearing the ground for fresh operations, burn the refuse, and so destroy thousands of seedlings.

If less gem-like in its compactness, the South Grove is certainly more free from trace of man's marring hand than beautiful Calaveras, and possesses the undoubted charm of being a comparatively untrodden portion of the great primeval forest. Doubtless a solitary wanderer might here run a fair chance of falling in with bears and deer; but I need scarcely say that our wary fellow-creatures gave us no chance of seeing them to-day.

In this South Grove the hazel grows even more abundantly than at Calaveras, and we gathered quantities of nuts without even dismounting. There are also a great

many wild gooseberries, which are pleasant to the taste; but each berry is so covered with sharp prickles that you cannot bite it, but must cut it open with a knife. I am glad that our domestic gooseberry requires no such manipulation!

Our homeward ride was, if possible, more lovely than the morning, the tender dreamy lights of evening blending all harsh tones of earth in one soft haze, throwing a velvety richness over the forests, and combining all shades of russet and gold, green, grey, and purple,—a world of rich colouring, all subdued and glorified.

There goes the bell for tea! No unwelcome sound, I assure you!

I forgot to tell you that we saw an unusually large rattlesnake. Mike made for him, but the wily snake escaped.

A gentleman from the Eastern States arrived here yesterday, and has been giving me a glowing description of his travels in Southern California, which has impressed him as a sort of earthly Paradise. And no wonder, for he left his home in New England in the bleakest February weather, and ten days later he was riding over wide plains already aglow with spring blossoms; and in the month of March he was camping out in the south of the magnificent San Joaquin valley, gorgeous with all hues of the rainbow. On every side he beheld vast prairies, literally ablaze with colour; the various flowers, not scattered as in European fields, but massed, so that one colour predominates, producing broad belts of blue or crimson, scarlet or gold, each

extending for perhaps a square mile, like a succession of vast flower-beds scattered over an interminable lawn of the loveliest green, which is produced by the *alfilleria*, the native grass of California.

Far as the eye could reach, this gorgeous carpet lay outspread, fading in the dim distance as it crept up the foothills of the Sierra Nevada, or the Coast Range, which, encompassing the great valley on the right hand and on the left, meet at its southern extremity, where the foliage is richest, and the magnificent ilex and other oaks, lie grouped as in a stately English park.

As yet the settlers in this natural Paradise are few in number, and many shy wild creatures still roam here almost undisturbed. My new acquaintance told me of his delight when, after riding for days through the fragrant flower-strewn pastures (always knee-deep, and often reaching to his saddle), he found himself on the reedy shores of the great Tulare lake, which was literally alive with wild-fowl of various sorts,—canvas-back ducks and snipe by the hundred, and wild geese innumerable. Of the latter, he saw one flock so vast that as they flew they seemed to cover the heavens; the rustling sound of their wings was like the rushing of a wild stormy wind, and their cries were deafening. As they settled down, flapping their white and grey wings in the sunlight, it seemed as if the blue lake were breaking in white foam for a distance of a couple of miles.

The *tules* or reeds, from which the lake takes its name, form a capital covert for herds of wild hogs, descendants of tame breeds, but now offering fair sport. His account

agrees exactly with what other men have told me of that district, except that those who arrived later in the season found that the flowery prairie was transformed into a dusty plain, with all vegetation dried up and withered,—a parched and thirsty land. But in spring-time it must be a glorious country for sportsmen and camping-parties, being as yet very thinly peopled.

It has the advantage of a perfect climate; for though the south of San Joaquin valley is hot, it is a dry heat, from which people suffer far less than from an average summer in the Eastern States. The thermometer does sometimes rise to 100° in the shade, but is found less oppressive than 90° on the east coast; and the nights are always cool. It seems a good proof of a healthy climate to hear how robust and rosy all the resident women and children appear to be.

The annual supply of rain is bound to fall between November and April, and during all the rest of the year a shower is a rare and rather startling event; so there is no fear of chill or cold, and little camping-gear is required. With dry turf for a mattress, and a wide-spreading oak for a canopy, a pair of blankets and a quilt may suffice for bedding. A camping-party would of course ride, and take a waggon to carry their quilts and necessary supplies.

By the latter half of March they would find the country in its spring beauty, and the air balmy and exhilarating. Excellent fishing and shooting, free to all comers, without money and without price, are to be had on the Kern river, and also till quite recently on the Buena Vista and Kern

lakes, where large trout were abundant; and quantities of snipe, duck, cranes, wild swans, and all manner of wild-fowl and other creatures, were wont to breed on the reedy shores where beaver and otter lived undisturbed. But the diligent settlers have worked their irrigation and drainage works so vigorously, that both these lakes, with the marshes surrounding them, have been dried up, and the shy, man-fearing creatures have had to seek more remote hiding-places.

Even the great Tulare lake itself is in danger of being gradually absorbed by the numerous canals and ditches with which the whole country is now being intersected; and as water is the chief boon to be desired by all the colonists, the very existence of the lake is threatened, and the peace of its denizens is already wellnigh at an end.

The poor lakes have simply been left to starve — the rivers, whose surplus waters hitherto fed them, having now been bridled and led away in ditches and canals to feed the great wheat-fields.

So it is to the hills, rather than to the low ground, that the sportsman must now betake him. The scenery is beautiful, including rivers and wooded foot-hills stretching back to the highest Sierras. The vast tract of foot-hills extending from Visalia on the Tulare river, to the head-waters of the Kern river (that is to say, the region where the Sierras and the Coast Range meet, enclosing the head of the great San Joaquin valley), is clothed with glorious forest, haunted by all manner of beasts, — deer and antelope, cinnamon and grizzly bears, wild-cat and fox, and Cali-

fornia lion or puma; the latter a cowardly (or sensible?) beast, which knows discretion to be the better part of valour, and so takes refuge in trees, though it really is very powerful, and quite able to damage an assailant. Altogether, there is ample material for a very pretty mixed bag.

This tract of forest is said to extend for about 150 miles, having a general width of about 10 miles. It includes the finest belt yet known of the *Sequoia gigantea*, scattered over the ridges which divide the Kaweah and King's rivers and their tributaries, the largest trees being generally found in the valleys where the soil is moist, and at a general elevation of from 6000 to 7000 feet above the sea-level.

The largest Sequoia that has yet been discovered is on King's river, about forty miles from Visalia. It is forty-four feet in diameter—*one hundred and thirty-two feet in circumference!* Wouldn't an English forester open his eyes pretty wide at such a giant as this! Happily for all lovers of the beautiful, the owners of saw-mills find that they cannot well "handle" these monarchs—they are not "convenient" either to saw down or to cut up; so, although the young ones are ruthlessly destroyed (I ought to say utilised for timber), the Big Trees are mercifully spared. Long may they live!

Some years ago the Californian Government enacted a law forbidding the cutting down of trees over sixteen feet in diameter; but as no penalty attaches to burning these, or to cutting all lesser ones, the law is practically worth-

less, and ruthless lumberers still set up their saw-mills on the edge of the Sequoia belt, and convert all they can into timber. Only a few months ago five saw-mills reckoned that, in the previous season, they had cut over two million feet of Big Tree "lumber." If such devastation is allowed to go on unchecked, the extermination of the species will follow pretty close on its discovery, and soon the glory of the primeval forest will be little more than a memory.

Other Big Tree groves have been discovered on the Tule river in the same district, which seems to have been the favoured home of the Gigantea. Not only are the biggest trees found thereabouts, but also the tallest mountains. The very high region where the great San Joaquin, King's, and Kern rivers all rise, includes some of the grandest scenery of the Sierras, the peaks and passes being considerably higher than those near the Yō-semité, while the stupendous precipices at the head of King's river can scarcely be exceeded anywhere. Some of the passes are at an altitude of upwards of 12,000 feet, while the peaks range up to about 15,000. Mount Whitney is 14,887 feet.

The rise from the plain to these great mountain-passes is far more rapid than to those farther north. Here the average ascent is 240 feet in the mile, to a pass of 12,000, while there the average rise is 100 feet in the mile, to reach passes at 7000 feet.

It strikes me that some of our sporting kinsmen might make out an uncommonly pleasant season "down south" in the San Joaquin.

MURPHY'S, *August 4th.*

Alas! my eyes have looked their last on the glorious forest; and now I am once more in the skeletonised districts abandoned by the miners. Early rising finds favour in these parts; and so, when I came down "at five o'clock in the morning," a pleasant woman provided me with a bowl of delicious new milk, and then I started for one last enchanting wander in the forest sanctuary. I "marked well its bulwarks, and told the red towers thereof," and let each lovely picture sink into my memory,—there to abide for ever as a vision of delight.

Many a time hereafter will those green glades and clustered pillars rise before me, as if to mock the dulness of ordinary landscape. The wonder to me is, why we are all content to spend most of our years in the most commonplace surroundings, and only devote a few short hours to such scenes as these.

I left Calaveras with my companions of yesterday. Our coachman was addressed by every one as "Colonel"; and I found he had been some general's A.D.C. in the civil war. Titles and offices do not necessarily imply much out here. The judge in the Yō-semité was about the hardest drinker there, and periodically had an all-round fight with his drinking pals,—and justice had to wait till he grew sufficiently sober to administer it. Luckily his services were not often required.

Indeed I am bound to say that not only have my own glimpses of Californian life shown it in the most peaceful light, but I have not even heard a rumour of any recent

lawless proceedings hereabouts. I am even considerably impressed by the very respectable tone of such talk as has reached my ears. Of course I make all allowance for the extreme courtesy and respect which is here paid to the presence of a woman; but it could scarcely be supposed that the entrance of a chance stranger would invariably check that torrent of profanity which we are told generally flows so freely. I am chiefly impressed by the civility of men in speaking to one another, and am reminded of the old lady who remarked that "it was a great pity that swearing should be done away with, for it was a fine set-off to conversation!" Apparently it is a set-off which is happily on the wane in these parts.

There may be rough corners in Western life at the present day, but the free use of bowie-knives and revolvers is happily no longer *de rigueur;* and though a lot of cattle-driving Texans and Mexicans, finding a favourite drinking-bar crowded with miners, hunters, and ranch-men, may still, under the influence of "chain-lightning" whisky, get up a drunken row, in which six-shooters and knives figure largely, and in which killing is not accounted murder, the general feeling of the community is in favour of peace and order; and the maxim of "live and let live" is widely approved.

This improved state of society is undoubtedly due in a great measure to the working of the far-famed "Vigilance Committees," who, when rowdyism had reached a point which made life altogether unendurable for peaceable, orderly folk, bound themselves together as members of a

secret society, sworn never to divulge the names of the committee (who, if known, would have become doomed men).

This self-constituted inquisition carried out its own decrees with a simple straightforwardness of purpose that commanded the deepest respect from the wild dare-devils who gloried in setting all ordinary law at defiance. No time was wasted on useless formalities. A man who was known to have committed a murder, or, far worse, to have stolen horses or cattle, or otherwise transgressed grievously, was quietly arrested, marched before the secret tribunal, tried, condemned, and hanged during the night. There was no pleasant excitement to support the culprit's spirits —no sympathetic friends to attempt a rescue,—all was done silently, with grim determination; and in the morning, a corpse, swinging from the low bough of some specially selected tree, alone announced that the ends of justice had been accomplished.

If a man was not considered bad enough for hanging, but his room was deemed better than his company, or if he was suspected of serious crime, he received a mysterious notice—

"Unless you leave this town in twenty-four hours, you are a dead man. +"

The notice was not signed, but a red cross in the corner was the recognised symbol of the dread committee; and the recipent well knew that it was no idle threat, and made tracks accordingly with the utmost speed. It was

rough justice, but effectual, and well suited to that rude state of society. After a while the Vigilance Committees resigned their functions in favour of legitimate government, but not till they had done the rough work,—acting like sledge-hammers in preparing the way for more refined tools.[1]

We look upon the summary justice of Lynch law as such a purely American institution, that it is rather singular to learn that the term originated in Ireland four hundred

[1] The grim humour of early days still, however, crops up from time to time. There was a story told the other day of an old man who had killed many men—had usually, indeed, killed every man who greatly displeased him. His favourite weapon was the rifle, his inseparable companion.

At last a man came all the way from Texas, with the avowed object of killing this ruffian, and so avenging a relative who had been one of his many victims. One day, as the old man walked along a path through the woods, his pursuer fired at him from behind a tree. The aim was true, and the victim fell to the ground shot through the body. But he was not dead.

After some time, the man who had shot him put his head out from behind the tree, to learn what had been the effect of the bullet. At that moment a rifle-ball crashed through his brain.

A little later, a neighbour came along the path, and found the Texan quite dead; and the old man, though plainly fatally wounded, was still alive and conscious, but unable to do more than raise himself on one elbow. After he had succeeded in attaining this position, he said, "Could yer roll that cuss over hyur, so's I kin hev a look at him?"

This was done, and he gazed at the lifeless body with a contemptuous kind of interest. "Bill Fosdick allus *was* a fool!" said he. "I knowed he couldn't keep his head behind that tree! I knowed he'd look out arter a while, and then I knowed I'd fetch him!"

Then the neighbour took off his coat, and adjusted it under the old fellow's head, and in a few minutes more, two dead bodies lay side by side in the woodland path.

years ago, when, in the year 1498, James Lynch, Mayor of Galway, "hanged his own son out of the window (for defrauding and killing a stranger), without martial or common law, to show a good example to posterity." It is a pity that so excellent an example did not become a recognised institution in Ireland as well as in America. By this time that unhappy land might have become peaceful and orderly!

It appears that young Lynch had found his way to Spain, where he received much kindness from a Spanish family. On his return to Ireland, he was accompanied by the son of the house, who was cordially welcomed by the mayor. But ere long both young men fell in love with the same fascinating maiden, and young Lynch, wild with jealousy, stabbed his friend. He was tried for murder by his own father, who, by virtue of his office as judge, had to pronounce sentence of death. Intercession was made for the young man, but the judge (prevailing over the father) ruled that such breach of hospitality was unpardonable. So the culprit was hanged from the window of the room where he had stabbed his friend, and the rusty bar which did service on the occasion is still pointed out to all interested in such matters.

It is only a fifteen-miles' drive from Calaveras to this hideous place; so I have had ample time to look about, and examine the very curious condition of the rocks, as they appear after a severe course of placer-mining. They are as dismal as the desolate settlement of deserted shanties and tumble-down weather-board houses, varied with aban-

doned mill-dams, where streams, once bright and babbling, were captured, and forced to work, whether they would or no.

The coach starts from here at some unearthly hour of the morning to catch the train at Milton, and I must sleep while I can. So good night.

CHAPTER XVIII.

A CALIFORNIAN HARVEST—GLENN'S FARM—LARGE VEGETABLES—SOUTHERN ORCHARDS—CALIFORNIAN OLIVES—BEET-ROOT SUGAR—GERANIUM HEDGES—LUXURIANT ROSES.

OAKLAND, NEAR SAN FRANCISCO,
August 6th.

AFTER a weary day of dusty travelling, it was truly refreshing to arrive last night at the fresh, pleasant home of "the sisters,"—my chief companions in the valley,—and to be welcomed and washed, and made to feel thoroughly happy and at home.

And, indeed, yesterday was a long day; for it began at 3 A.M., when the good landlord at Murphy's called me and gave me hot coffee. Then the coach came round, driven by "the Colonel," and we started by dim starlight. It was the best way to see the hideous country.

We halted for breakfast at a wayside inn kept by an Italian family, and the graceful daughters of the house presented me with the largest apples I have ever seen. We passed heavily laden orchards, with a wondrous

abundance of all fruits; but each breath of air was dust-laden, and the poor orchards were smothered.

At Milton I exchanged the dusty coach for dustier steam-cars, and so in due time reached the main line at Stockton—a dull, uninteresting town—from which point I might, had wisdom been awake, have taken a river-steamer, and come down the broad San Joaquin to San Francisco. It would have been a lovely night-expedition, by the light of a full moon, and the river is bordered by large willow-trees and tall reedy grasses. It is an expedition which no one ever thinks of making, which would have lent it additional charm in my eyes. But I was burdened with luggage, and could see no railway or steamboat porters; and so, not feeling equal to shouldering my own goods, I thought it best to run in the regular groove—which, of course, I now regret; for the last stage of that dusty, noisy journey was the worst of all.

It was scarcely possible to believe that the thirsty land of tawny dust across which we were rushing, could possibly be the same San Joaquin valley which I had last seen in the freshest spring green; or that these dry arid fields will, as if by magic, again change to one broad expanse of brightest green so soon as the refreshing rains of October fall.

Now the harvest has been reaped, the wheat threshed by steam on the field where it grew, and stored in sacks, which lie by the roadside till it is convenient to remove them (no fear of rain), and the straw is piled in hillocks till required.

When I speak of "a field," you must not understand the word in our contracted British sense. Here there are no obtrusive boundaries or divisions, but one broad level expanse of grain extending for miles and miles, till it fades away in the hot haze on the horizon, or else reaches nature's boundary of sun-burnt hills. Far as the eye can reach, extends the vast wheat-crop—the true Californian gold. It has been said of such a field, that "a man sometimes ploughs but a single furrow in a day, but that may be a furrow fifteen or twenty miles long!"

All harvest-work is done by machinery. As the steam-plough prepared the ground, so does the "harvester" reap, glean, thresh, and even sack the grain, mechanically. To the children reared under such influences, the poetry of old-world parables concerning sowers and reapers must be altogether lost, and the stories themselves without meaning.

In truth, the romance of a sweet, old-fashioned English harvest-field finds no echo here. There are no hedgerows nor scattered timber, to give a corner of welcome shadow; and in place of the rich undergrowth of sweet clover and succulent grasses forming a fresh green carpet for the golden sheaves, there is here only a vast plain of driest dust: far as the eye can reach, it sees only the yellow sun-scorched land, and great waggons heavily laden with golden grain, seen dimly through clouds of choking yellow dust. It is unattractive and unlovable, like most of the world's sources of wealth. I suspect that in all corners of the earth, poetry vanishes at the approach of the yellow-fingered

god of gold, even more quickly than from that of squalid poverty. Like Agur, she craves a middle path, and shuns both poverty and riches.

If threshing is not done by steam, the machine is turned by horse-power: perhaps twenty horses walk round and round in endless circle, in clouds of choking dust. Then the grain is carted away in great waggons, and the straw remains on the field. Should the farmer not care to thresh his crop at once, he leaves the corn standing in sheaves where it grew, well knowing that no rain will fall to destroy it, and that no thief will trouble himself to appropriate it; and there it may remain for weeks in perfect safety.

And what a crop it is! To begin with, the average return is from 60 to 70 bushels to the acre; but besides this, so large a quantity of seed drops, that one sowing produces two crops; and though the second is, of course, less abundant than the first, it has the advantage of being a spontaneous gift of the soil, involving no outlay in time or labour, only the care of reaping the self-sown crop.[1]

[1] It is consolatory to learn that British America bids fair to rival California as a wheat-producing country, though its colder climate does not offer the same attraction as at home. Here is an American view of Manitoba: "Mr Horatio Seymour, ex-Governor of New York—a gentleman whose position renders his utterances of more than ordinary value—has paid a visit to Manitoba, and has conveyed the result of his experience in the form of a letter to a friend. He declares, without fear of successful contradiction, that if Great Britain were to impose a tariff of 10 or 20 cents per bushel upon American wheat and other grain, allowing Canadian wheat and other products to enter her ports free, she could bankrupt the farmers of the American north-west. He saw thousands of acres of wheat clearing

Is it not enough to fill a British farmer with jealous despair to hear of such farms as Dr Glenn's in the Sacramento valley, extending thirty miles along the river? I am told that he has 60,000 acres of wheat, besides large vineyards and other crops. Fifteen hundred horses and mules, and hundreds of labourers, are employed on the farm. At times forty ploughs are working simultaneously, and three steam-engines drive the harvest-machinery. But most tantalising of all to the sorely tried farmer of our Mother Isle, is this blessed climate, which distributes the time of harvest throughout five months, from May till the end of September, during which not a cloud has a right to drop even a refreshing shower upon the dusty earth, and assuredly none to lay and saturate the uncut crops.

What with wheat, wine, and wool, nature has truly been bountiful to California. I hear of cattle-ranches in the Southern State on such an immense scale that the vast herds roam at large, their owners being scarcely able to guess at their numbers.

But everything in California is done on a large scale,

40 bushels to the acre, and weighing 63 to 65 lb. to the bushel. People, he says, are crowding there rapidly, and towns are springing up as if by magic. The Great Canada Pacific Railway will be at Puget Sound before the North Pacific of the United States, and the distance to Liverpool will be 600 miles shorter than any American line which could convey Dakota wheat for shipment thither. The best steel rails are being laid on the road—100 tons to the mile, at 56 dols. per ton; whilst on the parallel American line, the North Pacific, the same rails cost about 70 dols.—a difference of 1400 dols. per mile, in rails alone, in favour of the Canada Pacific. Mr Seymour is equally demonstrative on other points, and he has evidently been strongly impressed by his visit."

and so giant fortunes are built up. In farming, as in monster mining or railway speculation, it is neck or nothing. Mediocrity is nowhere (except so far as its own comfort is concerned, and there it has a decided advantage). A man must either be lord of vast flocks or herds,—a shepherd king or a cattle king,—or else he must be known as a princely grain-merchant or a railway potentate. It does not much matter what line he takes,—except, indeed, that pork is accounted lower than beef, and the swine-owner is supposed to rank below a lord of bullocks. So perhaps an ambitious Californian would prefer to leave the pig-market to Chicago, where piggy reigns supreme.

After all, it is no wonder that Californians should have such respect for everything done wholesale, for certainly nature gives them a grand example, what with Big Cliffs, Big Trees, and Big Vegetables.

What think you of cabbages six feet high, and weighing 50 lb. a head? Some have been found to weigh 75 lb. Carrots have been weighed averaging 35 lb. each; onions, 5 lb.; beet-roots, 200 lb.; water-melons, 95 lb.; pears, from 3 to 4 lb. each; potatoes, 15 lb. each. Cherries grow to three inches in circumference, and currants to an inch and a half.

Pumpkins of 200 lb. weight are very common. Near San Diego they grow to 350 lb., a single seed having been known to yield 1400 lb. weight of pumpkins the following season. Cucumbers fifty inches in length are not uncommon (meet company for the silvery salmon, which are brought from the Columbia river to San Francisco by

swift steamers before they have time to realise that they have been captured! Rejoice, ye epicures!)

I have learnt a good many of these particulars from a cheery party of Southern Californians, whose homes lie near the old Spanish settlements of Santa Barbara, Los Angeles, San Diego, and San Bernardino. They tell me I need not imagine that I know anything about California till I have seen those delightful semi-tropical districts, where flowers and fruit of all sorts grow in such profusion as does certainly sound almost incredible.

One lady told me of her father's orange-orchards, in which there are several trees, each of which bears upwards of 2000 oranges, and one tree occasionally yields 3000. An average tree should yield 1000 oranges at the age of ten to twelve years, and becomes more and more fruitful as it grows older; so, as it lives to the good old age of a hundred, increase must be something amazing.

The price of oranges in San Francisco ranges from fifteen to thirty dollars a thousand (£4 to £6); and as the trees in an orange-orchard are planted sixty to the acre, it does not need a very elaborate calculation to see that the owner of this fragrant crop must derive from it a very nice little income,—especially as expenses are not heavy, one man being able to look after twenty acres.

An orchard of ten acres may fairly be expected to represent an annual profit of £2000! and some men have thirty or forty acres of oranges (Mr L. J. Rose has 500 acres of orange-orchards!) Other men have immense vineyards, and separate large orchards for lemons, limes, citrons, wal-

nuts, nectarines, apricots, peaches, pomegranates, pears, apples, figs, almonds, olives, and Spanish chestnuts,—the latter especially telling of the early Spanish settlers, who brought these memorials of their own land, and planted them at the missions which they dedicated to San Gabriel and San Diego.

The olive-groves of San Diego and Santa Barbara are noted throughout the States, and the tree has become thoroughly naturalised, as trees and men are wont to do in America. So now Californian olives are in greater request than Sevilles in the Eastern States; and the number consumed is something marvellous, as you can judge from the custom of placing a small plate of pickled olives beside each guest, to be eaten during the intervals of dinner. I confess it is a custom which I highly appreciate.

Being Californian, I need scarcely say that they are at least twice the ordinary size, and are very juicy, and fresh in flavour. As a crop, the olive is highly remunerative, one tree occasionally yielding as much fruit as will sell for £10. This, however, is exceptional, and the tree must be well on in years; one of the most remarkable points in this culture being, that the olive-tree becomes more prolific year by year till it has completed its first century,—and how long it may continue fruitful it is impossible to say. There are trees in Asia Minor which are known to be upwards of 1200 years old, and are still in full bearing.

But as regards the immediate prospects of their planting, it appears that the trees (which are planted sixty to the acre) begin to bear at three years, and at five years old are

self-supporting—*i.e.*, they pay all expenses of tillage and harvesting, and yield a small surplus. By the sixth year they pay all the expenses of their early years, including the price of land and of young trees. At eight years of age they should yield 2000 gallons of berries to the acre, which, being reduced to oil, gives an average return of £250 to the acre. Of course a large amount of the fruit is reserved for pickling.

Some men devote their whole care to almond-growing; and I hear of one gentleman at Santa Barbara who reckons his almond-trees at 55,000!

One of the most paying industries hereabouts is the manufacture of beet-root sugar, for which there are large factories at San Francisco and Sacramento. The absolute regularity with which the rains and the dry season succeed one another at invariable seasons is singularly favourable to the growth of beet, which requires wet weather in its early days, and subsequent drought. By planting in January, this result is exactly obtained, and the saccharine quality of the beet is developed to the utmost, a much larger percentage of sugar being obtained in California than in Europe.

A ton of beets is expected to yield a barrel of the whitest sugar—in other words, about ten barrels to the acre; and the refuse (known as *bagasse*) is, when mixed with cut hay, excellent fodder, equally in favour for fattening cattle, or—on dairy farms—for the production of good milk and butter. Consequently large sheds are built near the sugar-factories, in which are stalled the

beeves, whose sole duty in life is to become fat as quickly as possible.

I am told that at these sugar-factories, as in most other industries where careful, steady men are required, the Chinese are those chiefly employed.

OAKLAND, *August 11th.*

There is some pleasure in gardening in California. One of the houses here is literally covered by a fuchsia, which, within three years from the day it was planted, had tapestried the whole wall—seventy feet in length, and three storeys high—and climbed right over the roof, forming a lovely veil of crimson bells.

Geraniums grow into bushes six or eight feet high, and eighteen to twenty in circumference, bearing perhaps a thousand heads in blossom simultaneously. Some sorts grow so rankly that they are planted as hedges, and grow to a height of twenty feet within a year—and of course the fence may be as long as you choose. Just imagine the blaze of colour produced by such a belt of blossom! Our humble clipped hedges are indeed unattractive, compared with such glories.

But the chief delight centres in the roses. I am told of one rose-bush in a Southern garden, which produces from 15,000 to 25,000 roses yearly. And Santa Rosa, true to its name, has a mammoth rose-bush, the stem of which is two feet in circumference, and rises twelve feet before throwing out a branch. Its total height is about thirty

feet, and circumference seventy feet. This grand rose-bush bears about 12,000 pure white roses at a time, counting half-blown buds.

Even more delightful is a red-rose bush a hundred feet in circumference, in the very heart of which is hidden a romantic cottage, thirty feet square, altogether concealed by the curtain of fragrant pink blossoms. Could a more fascinating nest be imagined?

This town belies its name—or rather the name is a survival of departed glories, for most of the original oaks were cruelly felled in the early days, before there was any idea of making a town here. So they have been replaced by swift-growing eucalyptus, which certainly does its best as a substitute; and all manner of ornamental trees and shrubs are fast growing up.

CHAPTER XIX.

CHROMO-LITHOGRAPHY—CALIFORNIAN GRAPES, AND WINES —SOCIETY—A TOIL OF A PLEASURE—A HOME IN THE NEW WORLD.

August 13th.

I HAVE spent a most interesting afternoon with Mr Bosqui, who owns large chromo-lithographic works here. He is at present reproducing a very beautiful series of studies of all the Californian grapes, painted by Miss Millard. I had no idea that the grape family was so numerous, or that it could be made to yield so much artistic variety. But what with every shade of purple, and red, and so-called white, and delicate bloom, and tinted leaves—and berries round or oblong, and bunches straggling or compact—the great Clan Grape musters strong and beautiful.

The amount of labour involved in reproducing such a series as this is certainly startling to the uninitiated. I suppose you know that each tint has to be laid on separately, and that if there are only two or three touches of one colour, they equally involve an extra stone, with the

general picture outlined, and these coloured spots alone marked. Some of these pictures require thirty-six separate stone blocks. So to produce three dozen coloured plates, perhaps a thousand stones have to be used! The ground-floor of a chromo-lithographer's establishment suggests the idea of a mason's yard full of paving-blocks.

I was particularly glad to have this chance of seeing all the Californian grapes, as the fruit itself will not be ripe for another month. Then, you can buy a large basketful for a shilling. Even now there are delicious grapes in the market, but I think they are forced.

I cannot say that the vineyards I have seen hitherto have at all answered to any poetical idea which the word may convey. Stiffly trained on low trellis, and smothered in dust, the vines hereabouts are singularly unattractive, and appear as though they must die of drought. Certainly they do not seem capable of producing luscious fruit in extraordinary abundance. Yet such is the case. From Sacramento in the north, to the extreme south of California, the vine flourishes, growing freely among the foot-hills, where the finest grapes are produced on land so poor, that by nature it would scarcely pasture goats.

For example, the great vineyards of Napa and Sonoma valley, a little to the north of San Francisco, are on arid, gravelly soil, barely a foot deep, with hard rocky subsoil. Yet these once barren hills are among the finest wine-growing districts of California.

For three years the settler must work in hope, clearing

away brush, preparing the soil, and planting his vines, at the rate of a thousand to the acre. In the third year he gets a small return; in the fourth year his vines should yield 1000 lb. to the acre; in the fifth year 6000; in the sixth year 8000 lb., which thenceforth is accounted a good average crop, though some vineyards yield a far higher proportion—the vines sometimes attaining a luxuriance which sounds almost incredible. I am told of one in Santa Barbara which yields an annual average of about four ton of grapes!

As an instance of what a vine may grow to in this glorious climate of California, they tell me of the Montecito vine in Santa Barbara. At three feet from the ground it measured forty-two inches in circumference. Its boughs overshadowed 10,000 square feet of ground. Its annual crop frequently amounted to considerably above 7000 clusters, equal to 12,000 lb. weight of grapes. Having attained a good old age of nearly sixty years, it was pronounced to have seen its best days; so it was resolved to cut it down, divide it into sections, and send it to the Philadelphia Exhibition as an example of Californian produce. It seemed sad to sacrifice so generous a friend for the instruction of unbelievers; but its owner consoled himself with the fact that his vine had left a daughter sixteen years old, an offshoot worthy of its parent, which already yielded an annual weight of 10,000 lb. of grapes!

Some vines, again, are noted for the gigantic size of individual bunches, and we heard of one bunch weighing 50 lb., which had been exhibited for some time at one of the

fruit-shops here, proving this to have been the true land of Eshcol!

Every known vine seems to take equally kindly to this soil, and flourishes to perfection.

A great variety of light wines are made which, though not yet considered fully up to the mark, are nevertheless largely consumed. Certainly there can be no reason why they should be in any way inferior to those of Europe.

There are various sparkling wines, both dry and sweet. One greatly in favour is a sweet, sparkling white Muscatel, made from the white muscat grape. Another very popular sweet wine is Angelica. Also a white wine made from German Riesling, and various wines from the Black Malvoisia, Black Pineau, Berger, Chasselas, &c., &c. There are dry Champagne, Clarets, Hock, Burgundy, Port and Sherry—all of which are literally fruity, as they retain a distinct flavour of the original grape. Claret is made chiefly from the Zinfandel grape, but fresh varieties are being planted every year.

The farmers supply this pure grape-juice to the great wine-houses of San Francisco, by whom vast quantities of light wines are exported to the Eastern States.

The majority of the grape-growers are, however, also wine-makers, and have their own wine-press in the vineyard, where the whole process of wine-making may be seen by whoever cares to do so. There is no adulteration here—only the pure juice of grapes, which, in this varying climate, always ripen perfectly. There are no bad seasons here—every year is alike good. The great aim of the

wine-maker is to produce light wines, pure and cheap, and free from spirits.

Some of the most successful wine-growers have their vineyards in the immediate neighbourhood of the garden-city of Los Angeles. I am told of a Colonel Wilson whose vineyards cover 250 acres, and his wine-press turns out 1000 gallons of wine to the acre.

By comparison, those of Don Matteo Keller seem small; yet he owns 140 acres, on which he grows upwards of 200 varieties of grapes. Every day during the grape season his wine-press produces 10,000 gallons of wine, while in his cellars 200,000 gallons are stored for ripening.

Only think of the amazing profusion of delicious grapes of every sort which this implies! One statistic of Colonel Wilson's grape-harvest is a trifling item of two and a half million pounds of grapes hung up by their stalks, to keep them fresh for the market. I confess I should like to be turned loose to graze in those delicious pastures!

The white Malaga grape is the best for making raisins, its thick skin and small seeds being in its favour. It requires rich soil, and yields 10,000 lb. of grapes to the acre. As four pounds of grapes go to one of raisins, the profit is considerable; but gathering and drying the bunches requires much care and patience.[1]

[1] Since the above was written, vine-culture has enormously increased in California, and in the summer of 1882 it was calculated that 100,000 acres of vines had been planted, all of which are expected to be in full bearing in A.D. 1886, and should yield the annual return of 40,000,000 gallons of wine. This, however, by no means represents the vine area of the future, as every year new vineyards are being planted. A multitude

OAKLAND, *August 15th.*

Every day I find it more difficult to realise that only twenty-five years ago San Francisco was a desolate heap of sand-hills, varied with swamp. And now there is not only a huge populous city, but all round the vast harbour, and in every direction, there have sprung up large towns, with multitudes of pretty villas, all embowered in flowers.

This city of Oakland is but one of many of these flourishing daughters of the San Franciscan Mother Superior, from which she is separated by about seven miles of sea. It has a population of upwards of 50,000 persons, of whom, on an average, 10,000 daily cross the harbour by the splendid half-hourly ferry steamboats.

of small home vineyards of from ten to thirty acres have been taken up in pleasant sheltered valleys, by men of small means, who look rather to making a home than a great fortune.

But large capitalists are now taking up vine-culture on a more remunerative scale, and many vineyards of 600 acres have recently been established. One of 1500 acres has been started near Los Angeles by a company, and Mr Leland Stamford has already planted 1000 acres in Butte County, and is said to purpose annually enlarging his borders till he has 10,000 acres of vines!

The crops of 1882 suffered considerably from the unwonted frosts of the spring. Grapes generally flower in the first half of April, and various precautions are adopted to protect the tender blossoms from the chance of frost. By the beginning of May all danger is supposed to be past. This year, however, there was frost on May 12th, 14th, and 15th; and as no precautions had been considered necessary, the damage done was serious.

The worst danger lies in warm sunshine after a frosty night, and this is neutralised by burning piles of brushwood, the smoke of which clouds the sunshine.

Oakland possesses twenty churches, several banks, and a fine court-house. But its especial pride centres in its great Public Schools, and its State University, which is open to students of both sexes, to the number of 200, who receive a first-class education gratuitously. A special law forbids the sale of any intoxicating liquor within two miles of the university. Certainly it must be allowed that, what with free libraries and free schools, the Granite State takes good care of its children.

In the way of trade, Oakland has its own iron and brass foundries, potteries, patent marble works, tanneries, and various other large mercantile establishments. But its chief characteristic is the multitude of pleasant homes and pretty semi-tropical gardens, with a wealth of blossoms and most beautifully kept soft green lawns.

If people could be content to know only their near neighbours, Oakland and *its* suburbs might provide a very agreeable society. But when the visiting-list includes friends on the other side of San Francisco, then the long distances, and crossing the harbour, make society really hard labour. Even lunching out is a considerable exertion, involving innumerable changes and waste of half the day; and as to dining on the other shores, I only wonder how any one can undertake it. For once in a way it is interesting, and I greatly enjoyed an expedition to lunch with another of my pleasant Yō-semité companions, though doing so involved no less than twelve changes (six going and six returning), and involved five hours of travel, besides one of waiting for the train.

First, we drove from here to the street along which runs the city railway,—a most remarkable institution, inasmuch as *it is free to all men, without any manner of payment*, and all the people going on their daily errands get in and out just as they please, "without money and without price," anywhere within the city limits, which include five miles of railway. The trains stop at eight stations to pick up passengers; but their pace being somewhat leisurely, these occasionally swing themselves on, or jump off, wherever they choose. Trains, with the usual wide-funnelled engines, specially constructed for burning wood, and about fifteen steam-cars, each carrying about fifty passengers, run each way every half-hour—passing along the open street with no further precaution than perpetually ringing a bell, which tolls like a summons to church. One marvels how all the children escape destruction; but their birthright of wideawake sharpness seems a perfect safeguard.

The trains run to meet the huge ferry steamboats, which carry us across the harbour in about half an hour. On landing in San Francisco we find an array of street-cars which are large tram-omnibuses, warranted to carry us in any direction. We selected one which conveyed us right across the city to the railway station, whence the steam-cars are warranted to take us wheresoever we please.

On this particular occasion they took us to Millbrae Station, where our friend's carriage awaited us—making the sixth item in our list of conveyances!

This was my first glimpse of a really wealthy Californian home, and I confess to having been amazed at its

beauty. Like most houses here, it is built entirely of wood, for fear of earthquakes; but it would require a very close inspection to be sure that it was not a fine English country-house, stone built. The interior is admirable, every detail being in excellent taste, very rich, but all in subdued colours. Real Persian embroideries, and silk hangings that look oriental—Turkish and Persian carpets. Every ceiling painted in intricate frescoes of richly blended colours, and other decorations all perfectly harmonious, the work of Italian artists from New York.

The furniture of every room is *en suite*. In one which particularly attracted me, all the woodwork—bed, cabinets, mantelpiece, &c.—is of polished ebony, exquisitely inlaid with white wood, delicate trails of hundreds of small passion-flowers, with dainty butterflies, all in their true colours. The draperies of this room are old Persian embroideries, on a buff ground, relieved with maroon velvet.

Every bedroom has its large bath-room, with every conceivable refinement, such as elaborate school of art towels, &c.

In every room there are tastefully arranged flowers, well-chosen books, fine china, good bronzes. In the picture-gallery, which is lighted from above, there are art-treasures of England, France, and America—valuable paintings, and all manner of beautifully illustrated art-books. It is a picture-gallery arranged for family enjoyment, with most luxurious arm-chairs and sofas, and everything conducive to comfort, and is evidently the favourite sitting-room.

In short, it is an interior where unbounded wealth and good taste have worked hand in hand.

Equally delightful are the surroundings. Every villa here has a pretty, little, brilliant garden, full of flowers all the year round, and with a vividly green lawn, so kept by the constant playing of movable fountains, called sprinklers. Any bit of ground between the houses not so watered is simply dried-up dust, like the country generally.

Well, Millbrae has fifteen acres of this exquisite lawn, with garden-beds laid out in ribbon-borders and other patterns of colour. Fine hothouses, for palm, ferns, and other tropical vegetation, and beautiful shrubbery, with a small lake devoted to water-fowl and water-lilies. After luncheon, we drove all about San Matteo, which is another town of villas, each like a cosy English vicarage, with exquisitely kept garden.

This pleasant glimpse of one Californian home made me the more regret not having seen another, at which a magnificent ball was given two days ago by one of the San Franciscan millionaires. There were 2000 persons present; and though naturally somewhat "mixed," the display of dress and of diamonds was something amazing. One lady, of very recent creation, wore black velvet, with point-lace valued at £10,000. It was full moon, and a lovely summer night, but the beautiful grounds were lighted by hundreds of Chinese lanterns, and every detail that wealth could suggest was carried out to perfection.

The guests went down by special trains, and included all my friends of H.M.S. Shah, which had just happened to

come into port, on her return from Vancouver (you remember our festivities in Tahiti, on her northward voyage?)[1] They came to see me here, and the Admiral took me back to a pleasant dinner on board. Then she sailed again for Valparaiso.

Returning from Millbrae to San Francisco, we dined at a restaurant, where the bill of fare offered us good things innumerable, including oysters, sturgeon, and salmon, gumbo-soup, clam-chowder, terrapin-stew, squash-pie, fried mush, green-corn, wild-fowl of various sorts, mallard, canvas-back, teal and quail, antelope and elk venison, &c., &c., &c.

Afterwards a Chinese gentleman escorted us to the Chinese theatre, where he had kindly secured for us a very good box. We were unfortunate in the piece selected, which was singularly unpleasant; and the glare of lights, and torturing noise of discordant instruments, made us wish ourselves safely outside. It certainly was a very curious scene, but by no means an attractive entertainment.

A very large section of the city is occupied by Chinamen —for the Celestials muster strong in San Francisco; in fact they number about 30,000, and about 70,000 more are hard at work in all parts of California. Their special quarter in this city is known as Chinatown. It is built on hilly ground, and its long steep streets are intersected by narrow alleys and wretched courtyards, where an incredible number of human beings are huddled together in the smallest possible compass. The houses are as crowded

[1] 'A Lady's Cruise in a French Man-of-War,'—C. F. Gordon Cumming.

and as hopelessly dirty as in many parts of the old town of Edinburgh and other British cities, where the very poor congregate. All sanitary precautions being utterly ignored, the district is foul beyond description.

But the miracle is to see what really well-washed, neatly dressed, smiling and shining men come forth from their filthy and miserable homes, to do faithful and honest work at fair wages—not necessarily lower wages than those demanded by white men, but in return for which, work is, as a general rule, more conscientiously done.

The cruel and unreasonable howl against Chinese immigration is raised by jealous men who would fain keep a monopoly of all work, and do it on their own terms and in their own fashion—earning enough in a day to keep them idle for a week. They cannot forgive the frugal, patient, hard-working Celestial, who is content to work cheerfully from dawn till midnight, for wages equal to three shillings a-day (some can earn six shillings a-day), and contrive to save a considerable sum in the course of a few years. The low Irish and the dreadful San Franciscan *hoodlums* (young roughs) have no sympathy with the self-denial of men who willingly live on rice and vegetables, that they may save up such a sum as will enable them to return to their own homes, there to invest their little capital, first providing for their parents.

The constant cry against the Chinamen is, that they earn money in America, and take it all out of the country —even importing from China their clothes, their rice, and their opium—and so in no way benefit trade. Their de-

tractors do not take into account the good sterling work by which the country is enriched, both at the time, and in some cases permanently. For Chinese labour has been largely employed in all departments of State work—in railway and road making, and wherever else steady and hard and conscientious work is required. Many masters of large factories bear witness to the satisfactory nature of the work done for them by Chinese hands, in contrast with the manner in which it is scamped by white men, when they are tempted to yield to the general howl, and employ only white labour.

As domestic servants, they stand unequalled. My hostess tells me that hers are the comfort of her life. She finds them faithful, industrious, clean—and reliable; and that, after going through all manner of misery at the hands of dirty Irish housemaids and cooks, she has found domestic peace and comfort since the day her excellent Chinamen were established as cook and boy. I believe that most householders agree in this verdict, and find that their tame Chinaman is a tower of strength, that he can do marketing far better and cheaper than they could do it themselves, and that he is altogether a valuable acquisition.

So, however little John Chinaman may be appreciated as the representative of the coming race, his departure from California would be bewailed by many, as a serious loss to the Granite State.

Concluding Note.

The month of May 1881 was marked by the most extraordinary anomaly which could possibly have arisen, among a people whose national existence is based on the Declaration of Independence, and the assumption of liberty and equality of all men, without distinction of race or colour.

This extraordinary event was nothing less than that the American Legislature should have yielded to the clamours of the low Irish in California, and to their ceaseless anti-Chinese howl, to the extent of actually passing a law prohibiting all Chinese immigration for the next ten years, beginning from ninety days after the passing of the Act, heavy penalties being inflicted on any shipmaster who shall land any Chinaman of the labouring class at any port in the Land of Freedom. An exception is made in favour of merchants, diplomatists, travellers, and students, provided they are duly provided with passports!

A law has also been passed to prevent any Chinaman from becoming an American citizen—the fear being that so many might wish to avail themselves of that privilege, that the whole white population of the Pacific coast would ultimately find itself a small minority, and that the Chinese "Six Companies" (mysterious but mighty potentates, who rule all the affairs of their countrymen in California) would actually rule in the Legislature of the State.

That enactments so utterly un-American could have been suffered to pass, appears so extraordinary, that it has been generally assumed to have been brought forward by the Republican party, solely as a means of making political capital by securing the Democratic vote. If such was indeed

the secret spring of action, it is so far satisfactory to know that it failed in securing its object, the Democrats having frustrated that move by voting in favour of the bill. Public opinion appears to have been about equally divided on the question, the Eastern States taking part with the Chinamen, the Western States clamouring for his exclusion.

The clamour, however, has carried the day, and for the next ten years no Chinese workman may enter the Golden Gates of the American Paradise.

APPENDIX.

Reference to page 9, *last paragraph.*

This partial use of the Scotch office, recalls the fact that America received her first Bishop from the persecuted Episcopal Church in Scotland, in memory of which the peculiar office of that Church was at first adopted in America in its simplicity, though subsequently modified.

The circumstance was one of peculiar interest. Previous to the War of Independence there were no American Bishops, and all candidates for Holy Orders had to come to England to receive ordination. At the conclusion of the war, it was found that so many of the clergy had either died or been banished, that in the four colonies of Connecticut, New York, New Jersey, and Pennsylvania, there were seventy vacant churches, and in many parts of the country, clergy were required, but there was no means of obtaining ordination.

In the State of Connecticut only fourteen of the Episcopal clergy survived. These agreed that the time had come when America must have her own Episcopate, and that a meeting should be held to decide what steps must be taken. Only seven of this little band were able to assemble. They

met in a small cottage at Woodbury, and, having elected one of their number to that honour (Dr Samuel Seabury), they sent him to Britain to seek consecration from the Archbishop of Canterbury. Should difficulties arise on the subject, he was enjoined to seek consecration at the hands of the Scottish Bishops. This course was fully approved by all the clergy of New York.

Dr Seabury was courteously received by the Archbishops of Canterbury and York, and the Bishop of London, who, however, found endless causes for delay, fearing to offend the ruling powers, and finally announced that they could not consecrate any person who, from any cause, was unable to take the oath of allegiance.

The candidate for the Episcopate then suggested that he must appeal to the Scottish Bishops—a solution of the difficulty which had actually never occurred to the Archbishops. For the sister Church had passed through such fiery persecution during the last half-century, that her very existence seemed endangered. Two years after the battle of Culloden, penal laws had been enacted (A.D. 1748) which forbade any clergyman of the Episcopal Church to officiate in any church or chapel. He might hold service in his own house, but if more than four persons besides his family were present, he was liable to *six months' imprisonment for the first offence, and* TRANSPORTATION FOR LIFE *on the second!*

Under this crushing system, the persecuted Church seemed really to be melting away; for whereas at the time of her disestablishment in 1689 she numbered two Archbishops, twelve Bishops, and a thousand clergy, now when America came to claim her aid, she possessed only four Bishops, and forty-two clergy.

As those dared not meet in any recognised chapel, they assembled in an upper chamber, which had been fitted up

as such, in the house of the Bishop of Aberdeen, (Robert Kilgour, Primus) who, together with his Bishop-coadjutor, John Skinner, and Arthur Petrie, Bishop of Ross and Moray, consecrated Dr Seabury, as first Bishop of Connecticut and Rhode Island, on the 14th Nov. 1784.

As it was necessary that America should possess three Bishops, to carry on the succession, the Archbishop of Canterbury got an Act of Parliament passed, for one year only, to authorise the consecration of Bishops for foreign countries, without requiring the oath of allegiance. Two more Bishops-elect were then sent over from America to be consecrated at Lambeth. And thus the American Church owes her Episcopal succession alike to England and Scotland.

But her people have not forgotten the upper chamber in Aberdeen, and though Bishop Skinner's house was demolished not many years after this memorable event, its materials were employed to build a chapel on the same site, which chapel was sold to the Wesleyans in 1817 when its Episcopal congregation removed to a larger place of worship. It is purposed therein to hold a centenary service of no ordinary interest in the autumn of 1884, at which it is hoped that the Anglican Church of the three countries will be well represented.

For the days of persecution are happily a tale of the past. Scotland's penal laws were repealed in 1792. She now numbers seven Bishops and 242 Episcopal clergy, while the Church in America possesses more than sixty Bishops, and numbers her clergy by thousands.

The remains of Bishop Seabury were, in 1849, removed from their first resting-place in the public cemetery of New London, to the crypt beneath the chancel of the Church of St James, built on the site of his own church. A tablet on the wall records that :—

"Under the pavement of the Altar, as the final place of rest until the Judgment of the Great Day, now repose the mortal remains of

THE RIGHT REV. PRELATE, SAMUEL SEABURY, D.D. Oxon.

WHO FIRST BROUGHT FROM SCOTLAND

INTO THE ANGLO-AMERICAN REPUBLIC OF THE NEW WORLD

THE APOSTOLIC SUCCESSION,

Nov. 14, 1784."

Reference to page 17, *third paragraph.*

That such fears are by no means groundless, has been shown this autumn of 1883, when even favoured California has shivered in sympathy with the widespread volcanic commotion. The daily papers of October 11 thus record the event: "At one o'clock this morning a severe earthquake shook San Francisco. Three hours earlier there had been a slight shock, which passed without general notice, but there was no mistaking the visit at one this morning. The houses rocked as if violently shaken by a strong hand. Windows rattled as if they would fall to pieces. The air was filled with a strange rushing noise, and an indescribable tremor shook the earth. This lasted several seconds, and, wakening people suddenly from sleep, created widespread terror. I do not hear of any injury being done. It is more than twenty years since anything approaching this was felt in San Francisco."

Six weeks previously, on the 28th August—*i.e.*, the day after the terrific earthquake in Java—a series of great waves swept the coast of California, creating considerable astonishment even within the landlocked harbour of San Francisco, where, during several hours, the water rose and fell about one foot per hour.

Such warnings as these cannot but suggest the possibility of some more serious shock. In these matters, as in most

others, history occasionally repeats itself; and there are points in the brief history of this City of Sandhills, which suggest an unpleasant resemblance to that of another great commercial centre, the fate of which has pointed many a moral in the last two hundred years.

One of the most terrible earthquakes on record occurred in Jamaica in the year 1692, when, without the very slightest warning, the large and flourishing town of Port Royal was totally destroyed, and two thousand persons — whites and negroes—perished, all within the space of three minutes!—a catastrophe so appalling, that to this day its anniversary is observed by many of the Creoles as a day of solemn fasting and prayer.

Like the modern San Francisco in California, this wealthy city had sprung up with extraordinary rapidity, on a low sandy shore, busy business streets being actually built on land reclaimed from the sea, by driving piles into the sand. Unmindful not only of the wisdom which forbade building on such an unstable foundation, but also of the practical experience which has taught men accustomed to earthquakes to provide against them by building low wooden houses, these merchants of Port Royal built strong substantial brick houses, several storeys in height, with churches, schools, forts, and a luxurious palace for the governor. Of all these, only a very small number were founded upon rock. Within the short space of thirty years the insignificant village had developed into a very wealthy commercial centre, with a population of 3500 persons. Then, as now, an occasional very slight tremor of the earth afforded food for conversation, but of serious danger there was no fear. All seemed peaceful and safe till the 7th June 1692, a bright beautiful day of cloudless sunlight. Half an hour before noon, when all men were intent on their business, a very slight quivering of the earth

was observed, followed a few seconds later by another, and a hollow subterranean rumbling. A moment later there came a third earthquake-shock, and in an instant the earth opened her mouth (as at the judgment of Korah and his presumptuous brethren), and in the very sight of the survivors, swallowed up all the principal streets on the reclaimed ground, with the busy multitude, as they hurried to and fro without one thought of their impending fate. Then, in one monstrous wave, the sea swept inland to claim her own, as if mocking the puny mortals who had striven to infringe on her boundaries.

Of the sixteen hundred human beings who were engulfed in that awful moment, only one survived, as if by a miracle. The mighty wave caught him up ere he was hopelessly buried, and carried him into the harbour, where he contrived to swim till he reached a boat—a true ark of safety. The life thus wonderfully preserved was prolonged for forty-four years of active usefulness, and a monument in the renewed city to the memory of Louis Galdy, bearing date 1736, records this history.

Meanwhile fresh earthquake-waves overswept the city, which was submerged to the depth of several fathoms, and large ships, torn from their moorings, were floated over the roofs of the houses in the main streets, and were able in some cases to rescue the perishing inhabitants. All through the day and the following night the earthquake-shocks continued, and horrible were the sights witnessed by the survivors. The harbour was covered with floating human bodies—not only those of the victims of the previous day, but the corpses washed up from the cemetery; while some poor wretches had been caught in yawning fissures, which held them prisoners, only their heads above ground—and these had, in some cases, been gnawed by ravenous dogs.

Of the whole town, only about two hundred houses were left standing, and most of these were houses built on posts, and only one storey high. Such brick houses as survived the great shock, were so shaken and shattered that the majority fell within a few days. Slight shocks were felt at intervals for upwards of a month, and pestilential exhalations arose from innumerable fissures in the ground. A sensible increase in temperature was observed. The heavens became lurid by reason of the discharge of sulphurous vapours, and unparalleled swarms of mosquitoes appeared on the scene to vex the survivors, the majority of whom fled to the plains of Liguanea, where they built wretched huts, and there abode, exposed to sun and rain, half starved, and inhaling such noxious vapours that a pestilence broke out, which extended to other districts, and carried off about three thousand persons—so that they who died of this plague were more in number than they who perished by the earthquake.

Such is the lamentable history of a city founded on the sand!

Long may San Francisco be spared from a similar fate!

Reference to page 167.

While these pages are passing through the press, another train has been attacked by white brigands. One Sunday morning in the month of September, a gang of "cowboys" attacked the express train on the Atchison, Topoka, and Santa Fé Railway, at Coolidge, west of Dodge City, Kansas. They opened fire on the train hands, killed the driver, and fatally wounded the stoker. They fired several shots at the guard, who, however, escaped injury. They then endeavoured to break into the express car, but were repulsed, and, an alarm being given, they decamped. The travelling cor-

respondent of the 'Daily News' states that the attack took place an hour after midnight, while the train had stopped to take in water. The passengers in the sleeping-car had all turned in, and the other passengers were more or less comfortably sleeping. Suddenly a shot was fired, followed by another, and then came what appeared to be a regular fusilade. Some of the passengers who were armed turned out, but the rattle of pistol-shots ceased as suddenly as it had commenced, and they found only the engine-driver lying dead at his post, riddled with shots, and the fireman close by, apparently fatally wounded. They learned from the fireman that as soon as the engine pulled up, a gang of men jumped on and ordered the driver to leave the engine. He refused, and they shot him dead. Two men who remained blazed away at the fireman, while the rest went off in search of the treasure which they believed was in charge of the express messenger. The firing had put this man on his guard. He barricaded the doors of his car, and through the window fired on the highwaymen, who vigorously returned the shots, but without effect. The appearance of the passengers on the scene suggested the wisdom of flight, and the robbers rode off without any other result of their raid than the murder of the hapless engine-driver. Coolidge is a little roadside station near the confines of Kansas, with nothing at hand but a water-tank and a telegraphic apparatus. This last was called into requisition, and a message was sent off to Dodge City. Thence a special train was promptly despatched with the sheriff and a band of armed citizens, but the highwaymen had already got a four hours' start, and it is presumable that they had well considered their plan of escape. It is believed that they have crossed into Colorado and made for the mountains.

Reference to page 197.—"*Preserved Smiths.*"

Such designations were by no means uncommon among the Puritans. The Frewens of Sussex bestowed on their children such names as "Thankful" and "Accepted." A member of this family, Archbishop *Accepted* Frewen — A.D. 1660 — lies buried under the east window of the Lady Chapel in York Minster. The ladies of the family were graced by such names as Mercy and Prudence, Faith, Hope, and Charity.

No doubt Miss Heavensent Harwood and Miss Remarkable Pettibones bore their strange names as pleasantly as though their godmothers had started them in life as Molly and Dolly.

David Hume, the historian, has told us that some of Cromwell's saints, rejecting such unregenerate names as Henry, Edward, or William, sometimes adopted a whole godly sentence. Thus the brother of "Praise-God Barebones" decided on being called "If-Christ-had-not-died-for-you-you-had-been-damned Barebones." But the people soon wearied of this long name, and so retained only the last word. Hence he was commonly known as "Damned Barebones!!" Thus John Bradford, in assuming the name of "Blood-bought," proved the wisdom of brevity.

Hume gives the names of eighteen persons who were impannelled as a jury in Sussex, in the days of the Commonwealth. They were as follows:—

Accepted Trevor, of Norsham.
Be-faithful Joiner, of Britling.
Called Lower, of Warbleton.
Earth Adams, of Warbleton.
Faint-not Hewit, of Heathfield.
Fly-debate Roberts, of Briling.
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Reference to page 198.

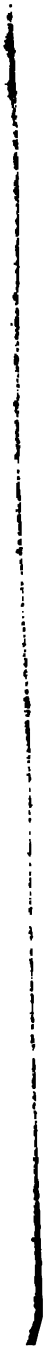
As an instance of the laxity of the law of divorce in many of the States, a New York paper recently quoted the case of a man who had fled from his wife in England, and who, on arriving in one of the Western States, instituted proceedings of divorce against her. She was summoned by notice, which was published for three consecutive weeks in a local newspaper. Before the woman had time even to receive notice of the proceedings, the man obtained his legal divorce.

I may add that a precisely similar case has occurred within my own knowledge, where a man left his respectable wife and family in Scotland, went to America, and was no more heard of by his relations. In the New World he went through this singular form of divorce, married a new wife, by whom he has a second family.

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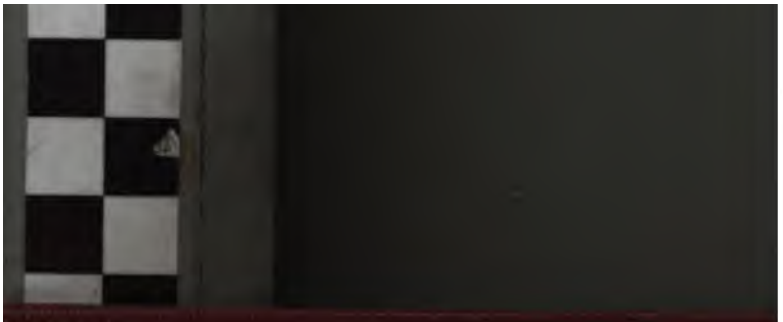


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